

THE
Refrigeration
AIR CONDITIONING
EQUIPMENT
INDUSTRY

DECEMBER, 1947

MERCHANDISING * INSTALLATION * MAINTENANCE

Jan.
26-29

CLEVELAND
PUBLIC
AUDITORIUM

YOUR
BIGGEST
DATE IN '48!

5th
All-Industry
Show

IN THIS ISSUE:

How to Prevent Damage to Insulation...What You Don't See
Service Is His Salesman...The Case for Candy Cooling
Pattern for Tomorrow's Meat Market? Red Hot Refrigeration

YOU'LL SEE
WEBER ROLL-A-DOORS
WHEREVER YOU GO!



KEEP YOUR EYE ON THE WEBER WORLD!

There's no leveling off in sales of Weber Roll-A-Doors . . . because new outlets and new applications have been developed for this profit-making Line of Frozen Food and Ice Cream Cabinets. Refrigeration Service Organizations are finding lucrative Weber Roll-A-Door Servicing Contracts everywhere . . . servicing made easy by Weber's quality construction and advanced engineering. *The famous Roll-A-Door Principle, originated and developed by Weber . . . modern, eye-appealing design . . . greater accessibility . . . and durability, make Roll-A-Door Cabinets the most profitable display cases in the world. That's why you'll see Weber Roll-A-Door Cabinets wherever you go. So keep your eye on the Weber World!*

INVESTIGATE AND YOU'LL INVEST IN WEBER



BAKERIES . . . the nation-wide trend toward refrigerated pastry is gaining momentum with Roll-A-Door Cabinets building high-volume self-service sales of pies, cakes and other pastries.



THEATRE LOBBIES . . . the popular theatre lobby "Snack-Bar" becomes highly profitable with Roll-A-Door Cabinets stealing the spotlight . . . creating "impulse sales" of specialty ice cream.



DRUG STORES . . . Glass-doored Roll-A-Doors, providing superior visual display, are building a large volume, "take-home" self-service trade for ice cream in independent and chain drug stores all over the country.



WEBER



WEBER FURNITURE CO., INC.
5700 AVALON BOULEVARD, LOS ANGELES 54, CALIFORNIA

Los Angeles • El Paso • Sales Offices In All Principal Cities
Warehouse Stocks in Key Metropolitan Areas

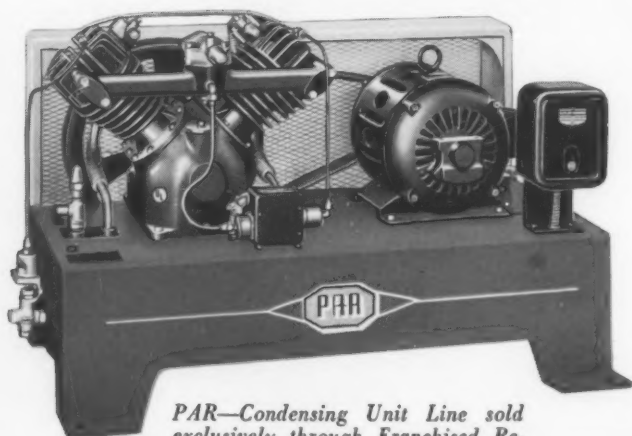


**YEAR
AFTER
YEAR...**



PAR

Gives **GOOD,**
DEPENDABLE SERVICE



PAR—Condensing Unit Line sold exclusively through Franchised Refrigeration Equipment Wholesalers!

Year after year Par Condensing Units have rendered good, dependable service. The wide range of sizes and models provides for "tailored" installations . . . a proper size and proper model to fit every application . . . giving balanced performance for maximum economy and efficiency.

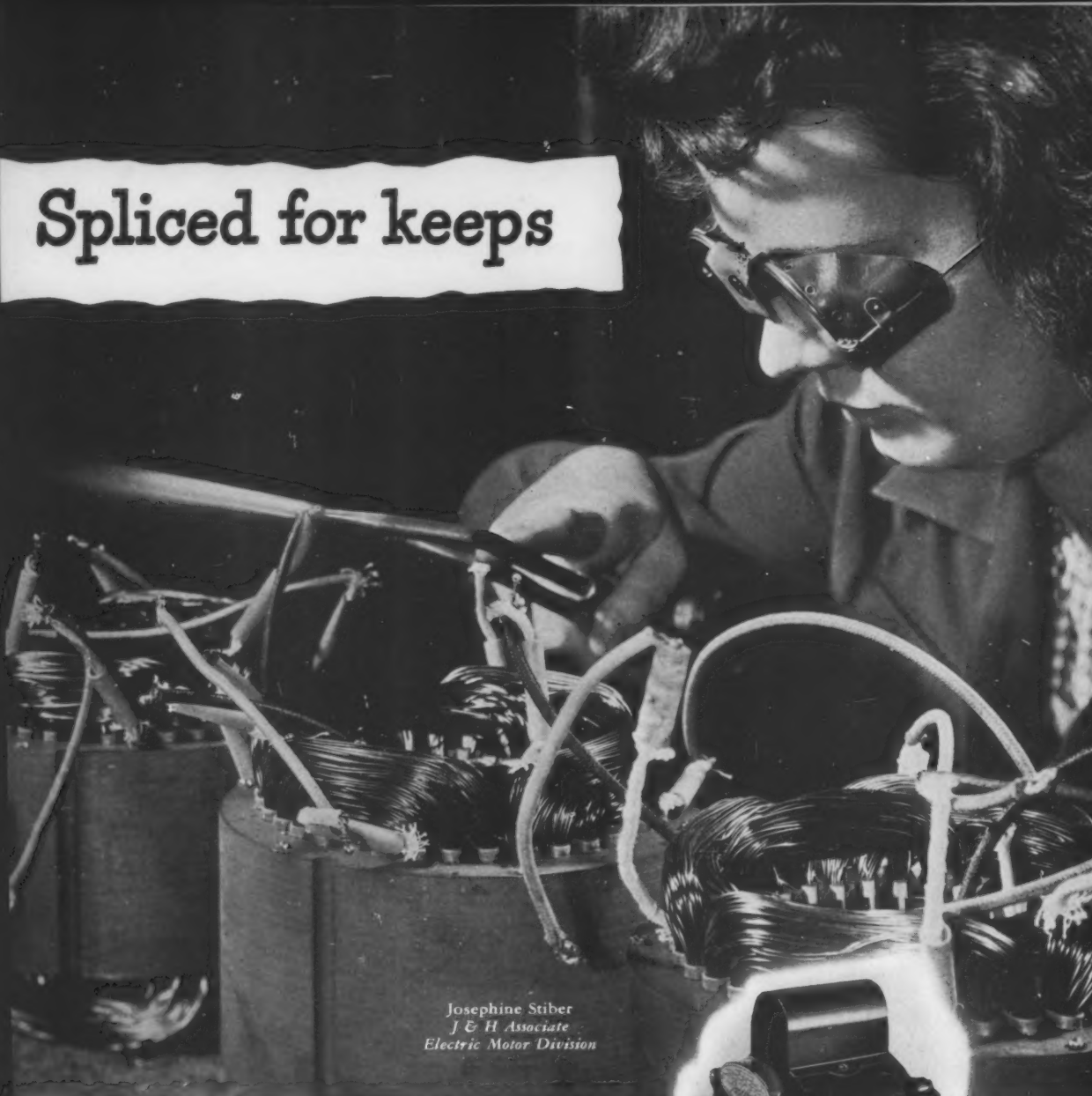
See your Par wholesaler for complete details about the Par line or write for Par catalog R-98.

Lynch

... By Comparison — You'll Buy PAR
Manufacturing Corporation

General Offices, Toledo 1 • Factory, Defiance, Ohio, U.S.A.

Spliced for keeps



Josephine Stiber
J & H Associate
Electric Motor Division

Welding is the positive way to splice coil ends—there's little chance for a loose connection in Jack & Heintz electric motors because the joints are *permanent* and *clean*, devoid of flux acid which often spatters when coils are soldered.

Methods like this build into Jack & Heintz motors the *extra* years of service expected of a quality product.



Better electric motors
through
JACK & HEINTZ
Mass Precision

JACK & HEINTZ PRECISION INDUSTRIES, INC., *Cleveland 1, Ohio*

THE

Refrigeration INDUSTRY

VOLUME 4, NO. 12

CONTENTS FOR DECEMBER, 1947

THIS MAGAZINE has no
official affiliation with ANY
group, society or association.

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Published monthly by REFRIGERATION PUBLICATIONS, INC., Cleveland, Ohio. IRVING B. HEXTER, president; LESTER P. AUBRACH, vice president. An affiliate of INDUSTRIAL PUBLISHING CO., publishers of DIE CASTING, FLOW, INDUSTRY & WELDING, OCCUPATIONAL HAZARDS, and THE TANNING INDUSTRY. Copyright, 1947, by Refrigeration Publications, Inc. Member, Controlled Circulation Audit, Inc. Subscription rates: United States and possessions, \$2.00 per year; Canada, \$3.50; Foreign, \$4.00. Single copy price, 25 cents. All subscriptions subject to individual acceptance by the publisher.

THOUGHTS FOR MERCHANDISERS

**CUSTOMERS
DON'T WHISPER
SQUAWKS!**



A complaining customer can be very expensive. Bad news travels fast. Good merchandising dictates the need for doing what you can to avoid the loss or displeasure of a single customer. A sound idea for protecting your reputation for quality products is to equip with dependable, long life, low maintenance condensing units. And when it comes to refrigeration condensing units no name is more highly regarded than "BRUNNER." One good customer is worth more to you than the cost of any condensing unit so why settle for anything less than the best?

BRUNNER MANUFACTURING CO.

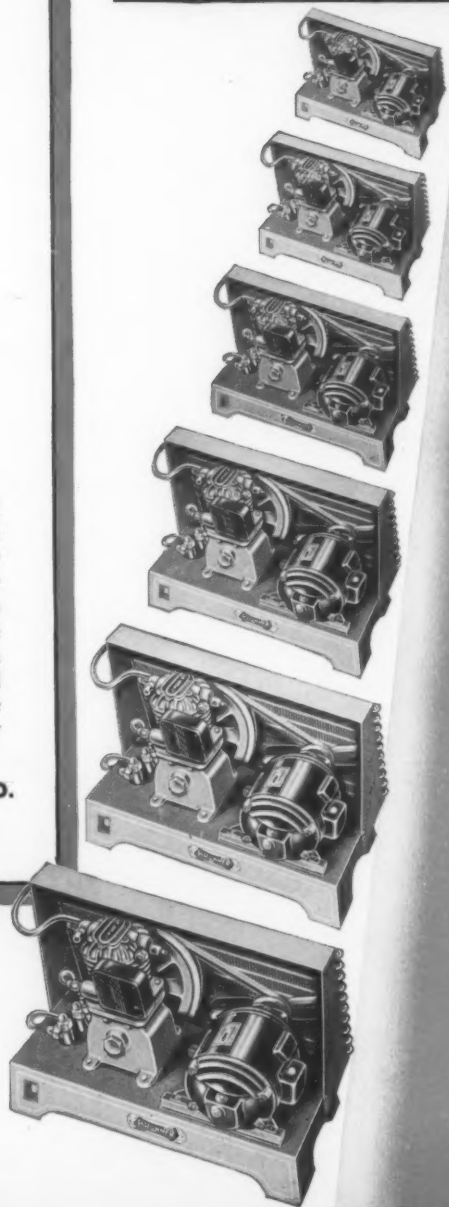
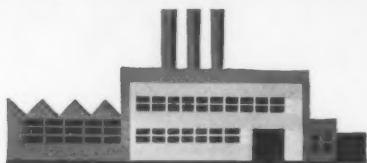
Utica 1, New York, U. S. A.

**AIR AND WATER COOLED MODELS
1/4 HP. TO 25 HP.**

BRUNNER
SINCE 1906

BRUNNER
SINCE 1906

REFRIGERATION
helps you serve better



THE REFRIGERATION INDUSTRY

**For Positive Maintenance of
HIGH HUMIDITY...**

PEERLESS

FLASH COOLERS!

● Where coolness without dehydration is essential, PEERLESS Flash Coolers give the desired performance. These are the original Flash Coolers, introduced 15 years ago by PEERLESS, and improved to their present high-efficiency in the refrigerating of cut meats, flowers, and all products where high humidity must be maintained. Wide, shallow coils spread under ceilings enable these units to deliver large volumes of cooled air with high relative humidity. Install them in cold storage boxes, walk-in and reach-in refrigerators, for retailers, wholesale houses, packing houses. Better preservation of products by PEERLESS Flash Coolers brings customer satisfaction.

For superior performance specify all these PEERLESS products: Flash Plates, Flash Coolers, Unit Coolers, Ice Cube Makers, Fin Coils, Off Center Coils, Expansion Valves and Capacity Boosters. Write for Details.

● Higher operating back pressure with low flat coils provides higher compressor capacity, a more efficient installation with reduced operating cost.

● Open-louvered drip pan permits free circulation of air through coil surface which produces large volumes of cool tempered air flowing downward by gravity over stored products.

● Refrigerant circuit is continuous copper tube with aluminum fins — non-soldered return bends. No Joints! — No Leaks!

● The famous Peerless Internal Rifling swirls refrigerant over entire interior surface of tubing, insuring a 100% internal wetted surface and in turn 100% coil efficiency.

● A Flash Cooler occupies a space not to exceed 16" from ceiling. A complete unit, it is quickly, easily installed by bolting the convenient hangers to ceiling.

**SOLD THROUGH LEADING
REFRIGERATION SUPPLY WHOLESALERS**

PEERLESS

of AMERICA, Inc.



General Sales Offices 2901 Lawrence Ave., Chicago 25, Illinois, U. S. A.

DECEMBER, 1947

The New **FRIGID-FREEZE**

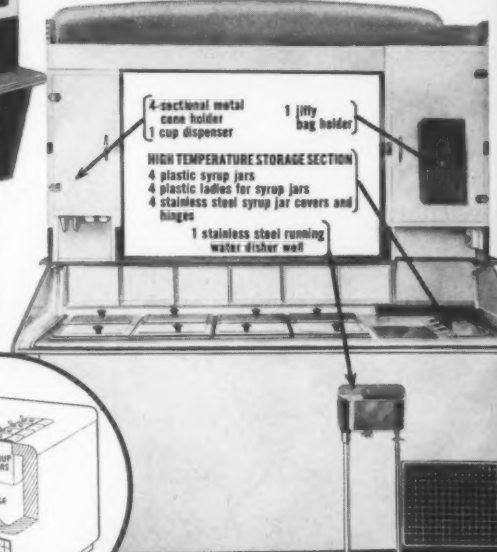
The Newest Addition to the



CABINET MODEL No. ICB-1048.
Storage capacity: 16 2½-gallon containers (40 gals.), 8 5-gallon containers (40 gals.), 270 quart bricks (67 gals.).

Once again FRIGID-FREEZE strikes pay-dirt with a revolutionary merchandising idea. Here's further proof of FRIGID-FREEZE leadership, of its consistent success in creating new money-making opportunities for its distributors and dealers.

MORE PROSPECTS—MORE PROFITS:
SUPER MARKETS • GROCERY STORES • DELICATESSEN STORES • VARIETY STORES • BAKERIES • DRUG AND CONFECTIONERY STORES WITHOUT FOUNTAINS • STATIONERY STORES • TOBACCONISTS • ROADSIDE STANDS • FRUIT STORES • SCHOOLS AND COLLEGES • CHURCHES • INSTITUTIONS • INDUSTRIAL STORES • PLANT FEED-IN & SNACK SERVICES • BOWLING ALLEYS • ROLLER AND ICE SKATING RINKS • AMUSEMENT PLACES • ETC.



TWO-TEMPERATURE STORAGE SPACE
40-gallon ice cream storage (12.2 cu. ft.) plus 2.25 cu. ft. high temperature storage section located above the compressor compartment, suitable for the dry storage of milk and fruit syrups, etc.

FRIGID-FREEZE 2-WAY SALES PLAN

1. Converts "dry" stops into "wet" stops... Here's the way to sell ice cream "all ways"; for immediate consumption on the premises as sundaes, frappes, milk shakes, malteds and other easily made popular drinks; also cones, cups, sticks and novelties; and for greater consumption at home in brick or bulk packages.

2. Makes new stops out of "no" stops... Ice cream can be sold anywhere, any time. The yen for ice cream, common to grown-ups and young folks alike, is always with us, in all seasons, and at all hours of day and night.

THE ICE CREAM CENTER FITS ANYWHERE

Cabinet occupies approximately 6' by 2½' floor space. Dimensions with superstructure installed: length 80 5/16", width 41", height 92 3/4". Heavy gauge steel, bonderized for rust-resistance, double baked DuLux white

enamel finish. All joints electrically welded for perfect vapor seal. Easily removable stainless steel top, with sub-top of steel. Rubber lids and snap on type collars of latest design. Standard insulation. Condensing unit 1/3 H.P. Tecumseh hermetic unit mounted on slide-out base. Current characteristics: 110 volt, 60 cycle A.C. Refrigerant: Freon 12. Price includes 1-year replacement parts warranty. Additional 4-year warranty on hermetically-sealed unit optional at extra cost of \$5 per unit.

SUPERSTRUCTURE FEATURES

Heavy gauge steel, bonderized for rust-resistance. 40-watt white fluorescent tube illuminates top header panel, also illuminates counter top and working surface of cabinet. Two 11" by 14" 3-dimensional ice cream pictures, illuminated by 3 30-watt white fluorescent lights. 1 25-watt incandescent bulb keeps cones crisp in cone compartment.

"JOIN UP NOW FOR BIG 1948

ICE CREAM CENTER

Pacemaking Low-Temperature Line!

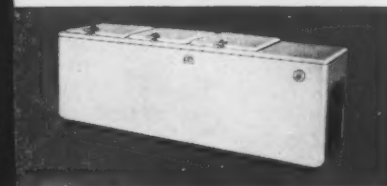
Join up now in the big 1948 FRIGID-FREEZE drive for bigger-than-ever Sales and Profits in the low-temperature field. Tie-in with the line that's "exclusively" low-temperature and that, from the very first, has been "out front" with important contributions to the continued growth of the ice cream and frozen foods industries.

A FEW PROTECTED TERRITORIES STILL OPEN

Rare opportunity for live-wire Distributors and Dealers

Please write today, indicating the territory desired, whether interested in distributor or dealer connection; also what lines you now represent.

"EXCLUSIVES" in every 1948 FRIGID-FREEZE cabinet



ICE CREAM CABINETS: 4-, 6-, 8-, 10-, 12-Hole

These modern, streamlined chest models are solidly built—engineered for years of dependable service and low upkeep. They conform to the most rigid specifications of the Ice Cream Industry. Here's the line you can sell—backed by the pacemaker in low-temperature equipment.

COMMERCIAL FROZEN FOODS AND ICE CREAM CABINETS

MODEL G-1046—20.2 CU. FT. CAPACITY. Superstructure features full color, 3-Dimensional pictures of *life-like depth*, an outstanding FRIGID-FREEZE "exclusive." Softly lighted from behind, these brilliant, eye-catching frozen food pictures put new merchandising magic into lagging sales. Cabinet has removable Thermopane sliding doors for peak period self-service and full temperature protection at other times. Packed with features...packed with sales appeal...and priced to sell! Other sizes available.

OPEN-TOP "SPOT-SPECIAL" CABINET-ON-WHEELS. A mobile, self-service cabinet that is rapidly setting new ice cream and frozen food sales records. Holds 200 to 250 1-lb. cartons. Can be wheeled to new locations daily to fit quick-changing merchandising plans. "Exclusive" 3-Dimensional superstructure contains full color frozen food or ice cream picture and space for price cards, flavor strips. Heavy duty hermetically sealed 1/3 H.P. compressor unit. Concealed wheels. Here's a cabinet that marks a new trend in merchandising ice cream and frozen foods—in super markets, chain stores, grocery and drug stores—and other traffic spots.

ALL-ALUMINUM PRE-FABRICATED WALK-INS—for low and high refrigeration temperatures. For hardening and holding ice cream, for freezing and storing of butter and every kind of packaged or bulk frozen foods.

FARM AND HOME FREEZERS

Available in 6, 12 and 18.5 cubic foot sizes. Equipped with a separate quick-freeze compartment. Zero Sentinel Alarm warns against dangerous temperature rise. FRIGID-FREEZE engineering refinements provide perfect vapor seal and insure maximum food protection.

Pioneers IN LOW TEMPERATURE REFRIGERATION

REFRIGERATION CORPORATION
OF AMERICA



Executive Sales Offices: Barber Sta., Perth Amboy, N. J.
Factories: Perth Amboy and Arlington, N. J.



DRIVE"

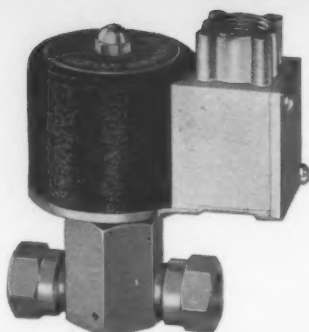


2 Tons Freon

Brass body, renewable soft Neoprene seat. Come-apart construction with rotatable coil and aluminum junction box. $\frac{3}{8}$ " F.P.T. connection.

SV 11 1 Ton Freon

Brass body, mounted in standard electrical outlet box. Easily installed. $\frac{3}{8}$ " F.P.T. connections.



INTERNAL PARTS
OF HENRY SOLENOID
VALVES ARE MADE OF
STAINLESS STEEL.

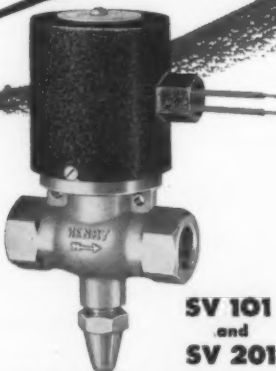
Henry Solenoid Valves
choice of
refrigeration engineers who
want quiet, efficient valves
...of advanced design!



**SV 31
and
SV 51**

3 Tons and 5 Tons Freon

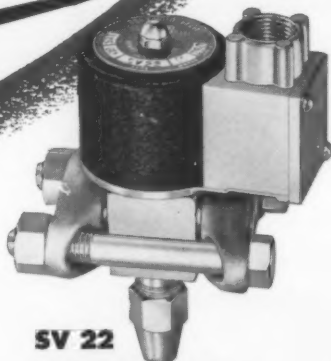
Brass body, come-apart construction with rotatable coil housing. Two piece impact plunger with direct acting metal-to-metal seat on SV 31. Neoprene seat on SV 51. Manual operating stem. $\frac{3}{8}$ " and $\frac{1}{2}$ " F.P.T. or solder connections.



**SV 101
and
SV 201**

10 Tons and 20 Tons Freon

Brass body with flanged come-apart construction. Pilot-piston operated. Connections $\frac{3}{4}$ " F.P.T. or $\frac{1}{8}$ " O.D. solder.



SV 22

10 Tons Ammonia

Steel body with come-apart construction and hardened steel renewable seat. Aluminum junction box. Manual operating stem. $\frac{3}{8}$ " and $\frac{1}{2}$ " F.P.T. flanged connections.

SOLD BY LEADING JOBBERS

HENRY VALVE COMPANY

Control Devices, Valves, Driers, Strainers and Accessories for Refrigeration and Air Conditioning and Industrial Applications

3260 W. GRAND AVENUE • CHICAGO 51, ILLINOIS

Cable: HEVALCO CHICAGO



THE REFRIGERATION INDUSTRY



We do this in self-defense

...but see how it works to your advantage

For many years we've manufactured small diameter tubes of the highest accuracy commercially obtainable.

One of the reasons for this is the consistent use of the bore telescope on our redraw tube stock . . . for a *small* defect in a large tube would mean a *large* defect in a small tube.

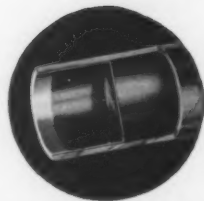
Since a tube with an imperfect bore could not escape our final tests and inspection, it would be rejected and scrapped . . . hence, we have a mighty good reason for ferreting out any possible imperfection right at the start. It saves *both* of us time and money—and assures a superior product.

THE AMERICAN BRASS COMPANY — FRENCH SMALL TUBE BRANCH

Subsidiary of Anaconda Copper Mining Company

General Offices: Waterbury 88, Connecticut

In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont. 47412

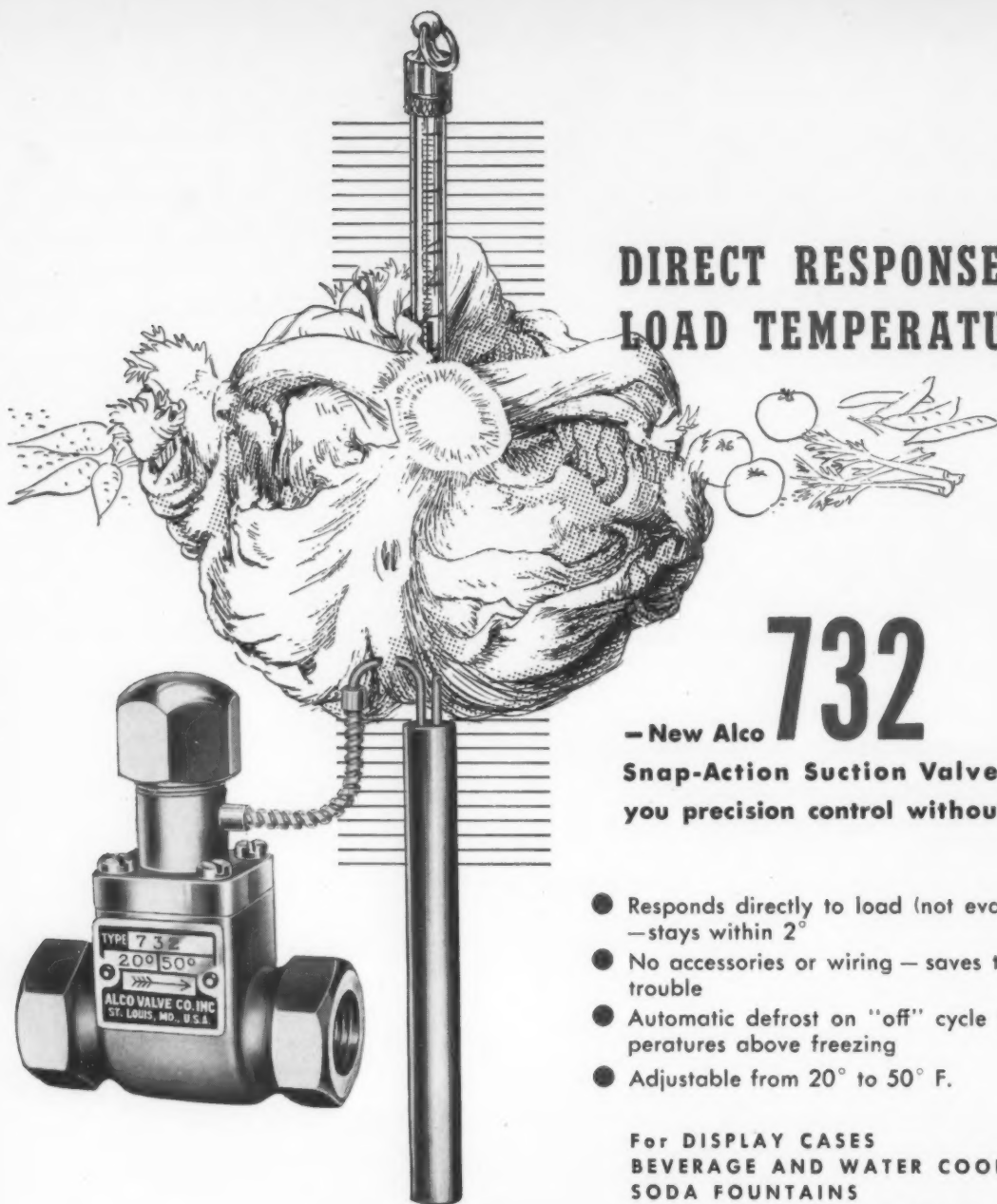


Precision-made tubes in Copper, Brass, Bronze and Copper-Nickel Alloys; in sizes from .015" O.D. to 1" O.D. with wall thickness down to .004"; round, square, or irregularly shaped; in coils, straight lengths or special forms. Bourdon tubes, thermal expansion bulbs. And, of course, Anaconda Dehydrated Copper Refrigeration Tubes with the famous Cup Seal®.

® Patent Applied For



Anaconda Precision-Made Tubes



**DIRECT RESPONSE TO
LOAD TEMPERATURE!**

732

— New Alco
**Snap-Action Suction Valve gives
you precision control without wires**

- Responds directly to load (not evaporator) — stays within 2°
- No accessories or wiring — saves time and trouble
- Automatic defrost on "off" cycle for temperatures above freezing
- Adjustable from 20° to 50° F.

**For DISPLAY CASES
BEVERAGE AND WATER COOLERS
SODA FOUNTAINS**

and many others

Sold by leading refrigeration supply wholesalers everywhere. Send for Bulletin 732.



Designers and Manufacturers
of Thermostatic Expansion
Valves; Evaporator Pressure
Regulators; Solenoid Valves;
Float Valves; Float Switches.

ALCO VALVE CO.

843 KINGSLAND AVE. • ST. LOUIS 5, MO.

Fair and much colder



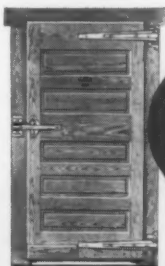
The stratosphere plane flies "above the weather" . . . miles above the earth, in a cloudless sky, where the air is thin and bitter cold. Every opening in the cabin must be sealed, to maintain living pressure and temperature within.

Not so vital, but certainly very important, is the proper sealing of openings in refrigerated spaces. Jamison Cold Storage Doors are dedicated to this job, and for more than half a century they have been doing it to the entire satisfaction of countless users, the world over. Jamison has played an important

part in the development of modern cold storage and refrigeration practice.

This vast experience is reflected in today's Jamison line . . . Jamison, Stevenson, Victor, and NoEqual Doors, and related products. With so much at stake in the way of maintenance and operating costs, as well as risk to stored merchandise, it is wise to insist on Jamison quality. Full information concerning Jamison-built Doors to suit your particular needs . . . and address of nearest branch . . . will be promptly supplied by the Jamison Cold Storage Door Company, Hagerstown, Maryland.

*Branches in
Principal Cities, Coast to Coast*



JAMISON
COLD STORAGE DOORS

America's Quality Line of COMMERCIAL REFRIGERATOR HARDWARE

Superior DESIGN

A new, exclusive principle was conceived in the development of this trip lock. It provides the strongest, most positive locking grip ever devised . . . with smooth, finger-tip operation. There is nothing comparable — in action or effectiveness — on the market.



WHEN IT TRIPS
IT GRIPS

Astute ENGINEERING

Details count. Provision of self-lubricating Oilite bronze bushings . . . insertion of a stainless steel pin . . . these are, perhaps, mere details in the engineering of a moderate capacity hinge. But in Grand Rapids Brass Company products, such details earn you the good will of users long after you have forgotten the sale.



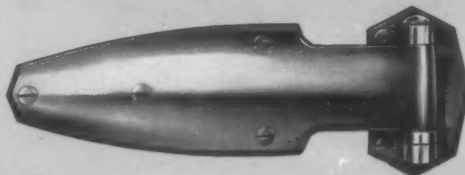
Shaded portion shows
Oilite bronze bushings
at points of wear and
stress



Dependable PERFORMANCE

This rugged forged brass hinge is furnished for cooler doors weighing into the hundreds of pounds. But it floats like a feather on its ball bearings — stands the shock of hundreds of daily openings and closings. Because it's designed right, engineered right, built right by Grand Rapids Brass.

Ball-bearing forged-brass hinge
for walk-in cooler



Preferred For NEW CABINETS . . . Preferred FOR REPLACEMENT

Here, Mr. Service Man, is an extra-money opportunity for you! Thousands of leaky old cabinets are suffering from worn, damaged, obsolete locks and hinges. You can profitably restore them to new, cold-tight efficiency with new, modern hardware from Grand Rapids Brass Company. Gives your customers the identical fittings preferred by makers of modern commercial refrigerator cases. Our new service manual simplifies the job. It's a money-maker, and it's FREE. Write for copy today!

Grand Rapids Brass Company

Makers of Dependable Refrigerator Hardware for over 40 Years

Grand Rapids 1, Michigan



**THE ONLY COMBINATION
FOOD AND BEVERAGE
COOLER THAT CAN BE
OPERATED WET OR DRY**

THE NEW

ARTKRAFT BEV-FOOD

AT ONLY \$385 RETAIL (f.o.b. factory) IT OFFERS THE LOWEST COST PER CUBIC FOOT USABLE REFRIGERATION SPACE IN THIS SIZE RANGE

**A high quality, self-contained "plug-in" unit.
Each compartment can be used entirely for dry refrigeration.
Top opening prevents spill-out of cold.**

IDEAL FOR:

RESTAURANTS
ROADSIDE STANDS
DAIRY STORES
HOTELS
TAVERNS
FISH MARKETS
FACTORY CAFETERIAS
HOSPITALS
SODA FOUNTAINS
BOWLING ALLEYS
MEAT MARKETS
DELICATESSENS
CANDY STORES
DRUG STORES

SPECIFICATIONS:

Sealed cabinet: 65 $\frac{1}{2}$ " x 38" x 29 $\frac{1}{2}$ ".
Solid 3" insulation—Vermin-proof.
Top compartment: 34 $\frac{1}{2}$ " high x 20 $\frac{1}{2}$ " wide x 18 $\frac{1}{2}$ " deep.
(Slightly over 6 $\frac{1}{2}$ cu. ft.)
Food compartment: 21 $\frac{1}{2}$ " wide x 28 $\frac{1}{2}$ " high x 20 $\frac{1}{2}$ " deep.
(Slightly over 7 $\frac{1}{2}$ cu. ft.)
Total storage capacity: 14 cu. ft.
Finish: Exterior—Silver blue. Interior—porcelain enamel.
Top and 2 sliding covers, stainless steel.
Condensing Unit: $\frac{1}{4}$ H.P., twin-cylinder air cooled. Equipped with
Tecumseh, Universal Cooler, or Copeland unit.
Motor: $\frac{1}{4}$ H.P., 60 cycle, single phase, 1750 r.p.m., 110 volts, capacitor type.
Refrigerant: F 12 Freon.
Automatic light in food compartment. 8-point cold control.

DEALERS:

Ask your distributor for this great profit-maker—or write us for his name. Distributed in many areas by G. E. Supply Corp.

DISTRIBUTORS:

Write for details of franchise for open territory.

THE ARTKRAFT MANUFACTURING CORP.

Quality Products for More Than a Quarter of a Century
300 KIBBY STREET • LIMA, OHIO, U.S.A.

THIS COUPON FOR YOUR CONVENIENCE

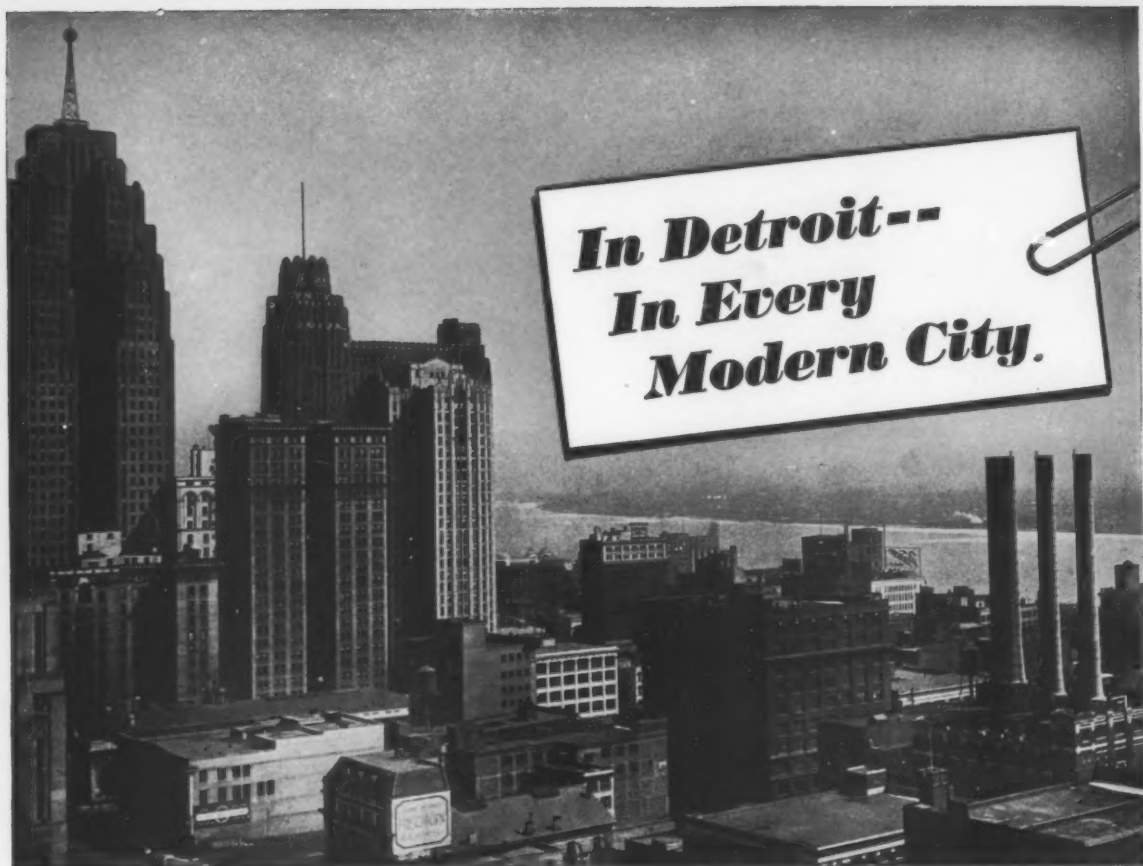
THE ARTKRAFT MANUFACTURING CORPORATION
300 KIBBY ST., LIMA, OHIO, U. S. A.

- ☐ Please send the name of the BEV-FOOD distributor in this territory.
☐ Please send details of distributors' franchise.

Name

Firm

City



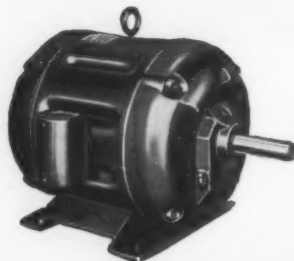
WAGNER *Quality* **MOTORS**

provide quiet, troublefree power for Heating, Ventilating and Air Conditioning Equipment

Cool and comfortable in summer... Warm and delightful in winter—Americans are becoming accustomed to conditions that make work and play more agreeable. Not only in large cities, but in villages too, air conditioning is a part of everyday life.

Heating, ventilating, and air conditioning has become a tremendous industry and Wagner engineers have played an important part in its development. Today, hundreds of thousands of Wagner Quality Motors are providing dependable, quiet, troublefree power. Users of Wagner motors also profit by our quick, convenient, nationwide service facilities.

Twenty-nine branch offices, located in principal cities, are ready to give you service. They can help you solve all of your motor problems. Write for Bulletin MU-185, addressing Wagner Electric Corporation, 6442 Plymouth Avenue, St. Louis 14, Mo.



Regardless of what your motor requirements may be—large motors... small motors... Wagner makes them all. The motor illustrated is typical of the Wagner line of polyphase and single phase motors. Choose a Wagner motor for your next installation.



Consult Wagner Engineers on all Electric Motor Problems



BRIDGE BRAKES • POWER AND DISTRIBUTION TRANSFORMERS • MOTORS • UNIT SUBSTATIONS

ELECTRICAL AND AUTOMOTIVE PRODUCTS

THE REFRIGERATION INDUSTRY

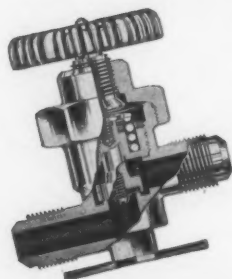
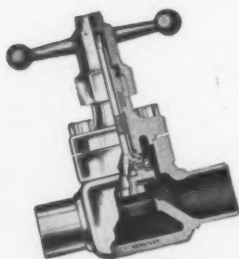


Close as your phone-

LESS INVENTORY REQUIRED!

RIGHT near you there's a man carrying a load for you—because it's *his* business. He's your Kerotest Wholesaler . . . whose ample stocks of Kerotest Quality Valves and Fittings are at your disposal so that you may have everything you need "on tap" . . . without the burdensome overhead of a private inventory.

Located everywhere . . . to serve all America . . . your Kerotest Wholesaler is as close as your 'phone. Look to him for time-saving, money-saving service regularly—for emergency service when needed—on Kerotest Quality Valves and Fittings for every Air Conditioning and Refrigeration need.



See your

KEROTEST

Wholesaler

KEROTEST MANUFACTURING CO.
PITTSBURGH, PA.

AMERICA'S FIRST NAME IN QUALITY VALVES

15 Talking Points

PLUS SERVICE BY
REFRIGERATION WHOLESALERS
WHEN AND WHERE YOU WANT IT



GENERAL CONTROLS' Factory Branches and Refrigeration Wholesalers are located in principal cities. Their ade-

quate facilities, the experience and skilled counsel of their personnel are as conveniently near to you as your telephone.

Of equal importance—when you are considering automatic temperature, pressure and flow controls—is that General Controls are *good* products, engineered right, built right, proved by performance.

There are talking points about General Controls' engineering and field service that should benefit you... as they are benefiting others in your line of business. A wire, letter or telephone call (see yellow classified section of principal city telephone directories) will bring a qualified Controls Engineer to your office.

GENERAL

801 ALLEN AVENUE



CONTROLS

GLENDALE 1, CALIF.

FACTORY BRANCHES: PHILADELPHIA • ATLANTA • BOSTON • CHICAGO • DALLAS
KANSAS CITY • NEW YORK • DENVER • DETROIT • CLEVELAND • PITTSBURGH
HOUSTON • SEATTLE • SAN FRANCISCO • DISTRIBUTORS IN PRINCIPAL CITIES

FOR COMPLETE

Specifications
request new
Catalog 52-C.

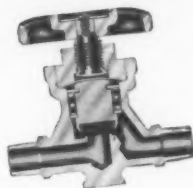
33-1

Superior

Life-Time DIAPHRAGM PACKLESS VALVES

OUTSTANDING FEATURES

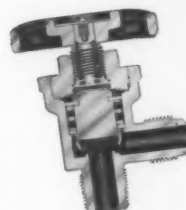
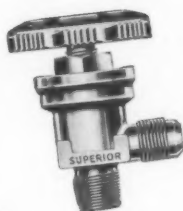
1. Husky one-piece lower stem.
2. Controlled stem travel assures "Life-Time" diaphragm performance.
3. Scientific lubrication, large bearing surfaces and polished stem heads eliminate wear and assure smooth, easy operation.
4. Large drillings give full flow.
5. Operates under normal pressure with flow in opposite direction.



6. Smooth pleasing appearance — symmetrical design.
7. Individual wrench pads for tightening flare connections.
8. Unique sweat connections permit soft or silver soldering without removing internal assembly.
9. High quality, long wearing, seating insert.
10. No special tools required for servicing.

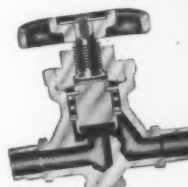
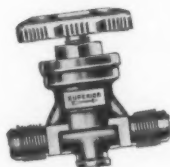
Superior ANGLE VALVES

CATALOG NUMBER	CONNECTIONS SIDE	CONNECTIONS BOTTOM	LIST PRICE EACH	NET WT. EACH LBS.	CODE WORD
104-4B	SAE Flare 1/4"	Male Pipe 1/4"	\$5.00	.75	Lefom
104-4C	SAE Flare 1/4"	Male Pipe 1/4"	5.00	.75	Lefro
104-6B	SAE Flare 3/8"	Male Pipe 3/8"	5.00	.75	Lefus
104-6C	SAE Flare 3/8"	Male Pipe 3/8"	5.00	.75	Legaz
105-8B	SAE Flare 1/2"	Male Pipe 1/2"	5.00	1.00	Legon
105-8C	SAE Flare 1/2"	Male Pipe 1/2"	5.00	1.00	Lejac
106-10D	SAE Flare 3/4"	Male Pipe 3/4"	6.00	1.25	Lekad



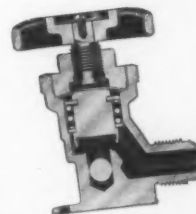
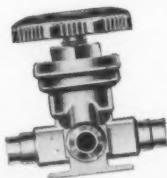
Superior LINE SHUT-OFF VALVES*

CATALOG NUMBER	CONNECTIONS	LIST PRICE EACH	NET WT. EACH LBS.	CODE WORD
204-4	SAE Flare 1/4"	\$5.30	.9	Lelim
204-6	SAE Flare 3/8"	5.30	.9	Lelot
205-8	SAE Flare 1/2"	5.30	1.25	Lemat
206-10	SAE Flare 3/4"	6.60	1.5	Lemjo
204-4S	O.D. Sweat 1/4"	5.30	.9	Lemuz
204-6S	O.D. Sweat 3/8"	5.30	.9	Lenag
205-8S	O.D. Sweat 1/2"	5.30	1.25	Lenek
206-10S	O.D. Sweat 3/4"	6.60	1.5	Lenov



Superior BRANCH SHUT-OFF VALVES*

CATALOG NUMBER	CONNECTIONS	LIST PRICE EACH	NET WT. EACH LBS.	CODE WORD
304-4	SAE Flare 1/4"	\$6.25	1.00	Lepem
304-6	SAE Flare 3/8"	6.25	1.00	Lepuc
305-8	SAE Flare 1/2"	6.25	1.50	Lepwe
306-10	SAE Flare 3/4"	7.50	1.75	Leraj
304-4S	O.D. Sweat 1/4"	6.25	1.00	Lesak
304-6S	O.D. Sweat 3/8"	6.25	1.00	Lesoz
305-8S	O.D. Sweat 1/2"	6.25	1.50	Letep
306-10S	O.D. Sweat 3/4"	7.50	1.75	Letuf



Page

Stocked By All Leading Wholesalers

Superior Valve and Fittings Co.

1309 WEST LIBERTY AVE. PITTSBURGH 26, PENN.
OFFICES IN PRINCIPAL CITIES STOCKS CHICAGO (61) LOS ANGELES (15) JOBBERS EVERYWHERE



DIRTY SERVICE CYLINDERS *cause trouble*

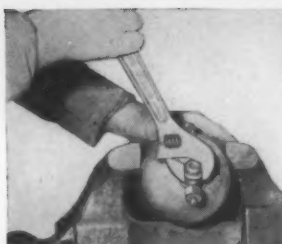
A DIRTY SERVICE CYLINDER WILL FOUL ANY REFRIGERANT

● The importance of clean service cylinders cannot be over-emphasized. Many service problems are definitely traced to dirty service cylinders. The only remedy is **KEEP YOUR SERVICE CYLINDERS CLEAN.**

Note the easy-to-follow method of cleaning service cylinders illustrated* and, if you wish additional information, or data on other service cylinder cleaning methods, read **ANSUL Bulletin "KEEPING SERVICE CYLINDERS CLEAN."**

* If you do not have your own service cylinder cleaning facilities **ANSUL** provides this service for you at a nominal cost. In addition, if requested, **ANSUL** will make the required periodic I.C.C. pressure test for you.

ANSUL WHOLESALERS are ready and equipped to render an intelligent, co-operative service to refrigeration engineers and maintenance men on problems which arise from time-to-time in the operation of refrigerating systems.



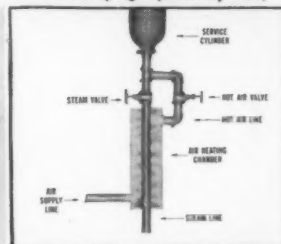
1 Remove valve and fuse plug.
(Some small cylinders do not have fuse plugs.)



2 Examine interior of cylinder with drop light. (Cutaway view)



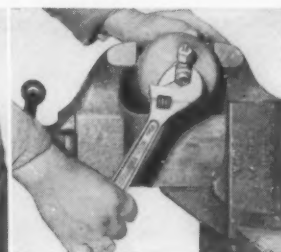
3 If scaly, pickle with 5% muriatic acid.



4 Blast inside cylinder with steam and hot air.



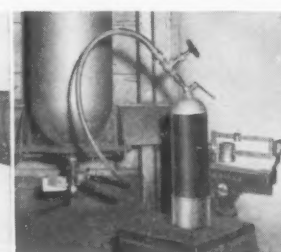
5 Cool to 150° F., inspect. Repeat cleaning if necessary.



6 Insert valve and fuse plug.



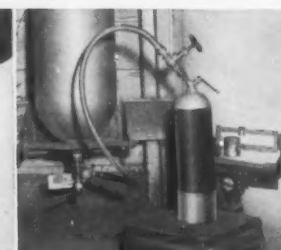
7 Evacuate.



8 Add refrigerant wash.



9 Shake and dump.



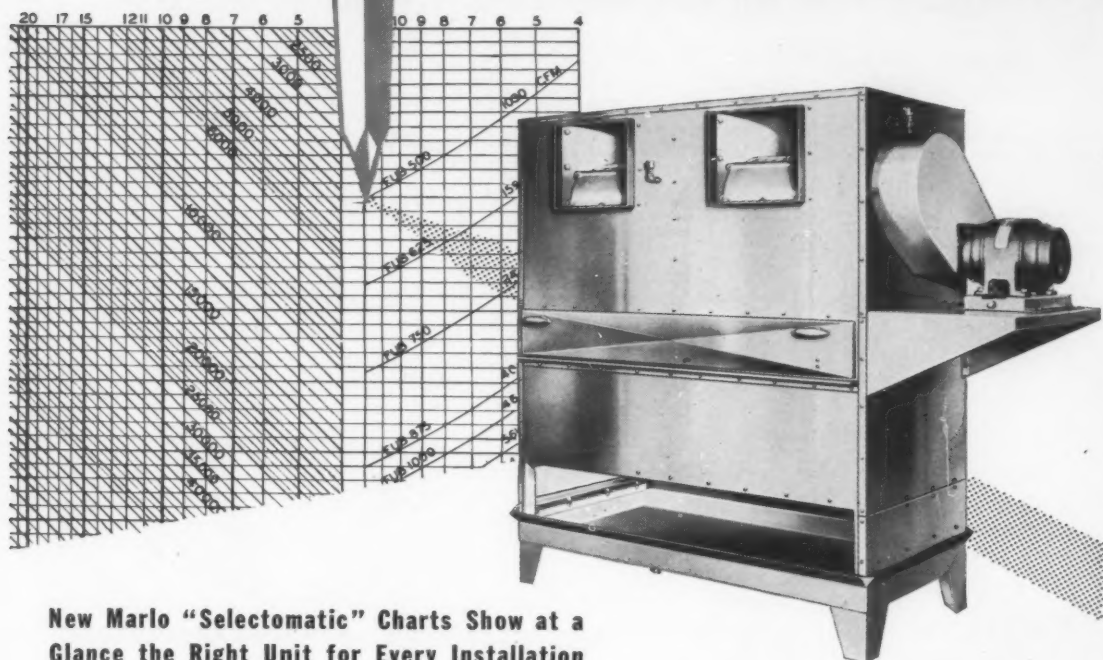
10 Fill with refrigerant for use.

ANSUL CHEMICAL COMPANY

REFRIGERATION DIVISION, MARINETTE, WISCONSIN

DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113"

SAVE HOURS OF COSTLY ESTIMATING... WITH ONE STROKE OF YOUR PENCIL!



New Marlo "Selectomatic" Charts Show at a Glance the Right Unit for Every Installation

For years Marlo Engineers have been painstakingly developing these charts so you can now select Marlo Industrial FUA and FUB Units "painlessly" So simple you can find the answer in a few seconds!

Save tedious, profit-devouring hours of computation —
Eliminate many causes of costly miscalculations —
Turn out more estimates faster, with less work —

These invaluable Marlo "Selectomatic" Charts are yours for the asking. Send for your FREE copies today.

MARLO = HEAT TRANSFER
Since 1925

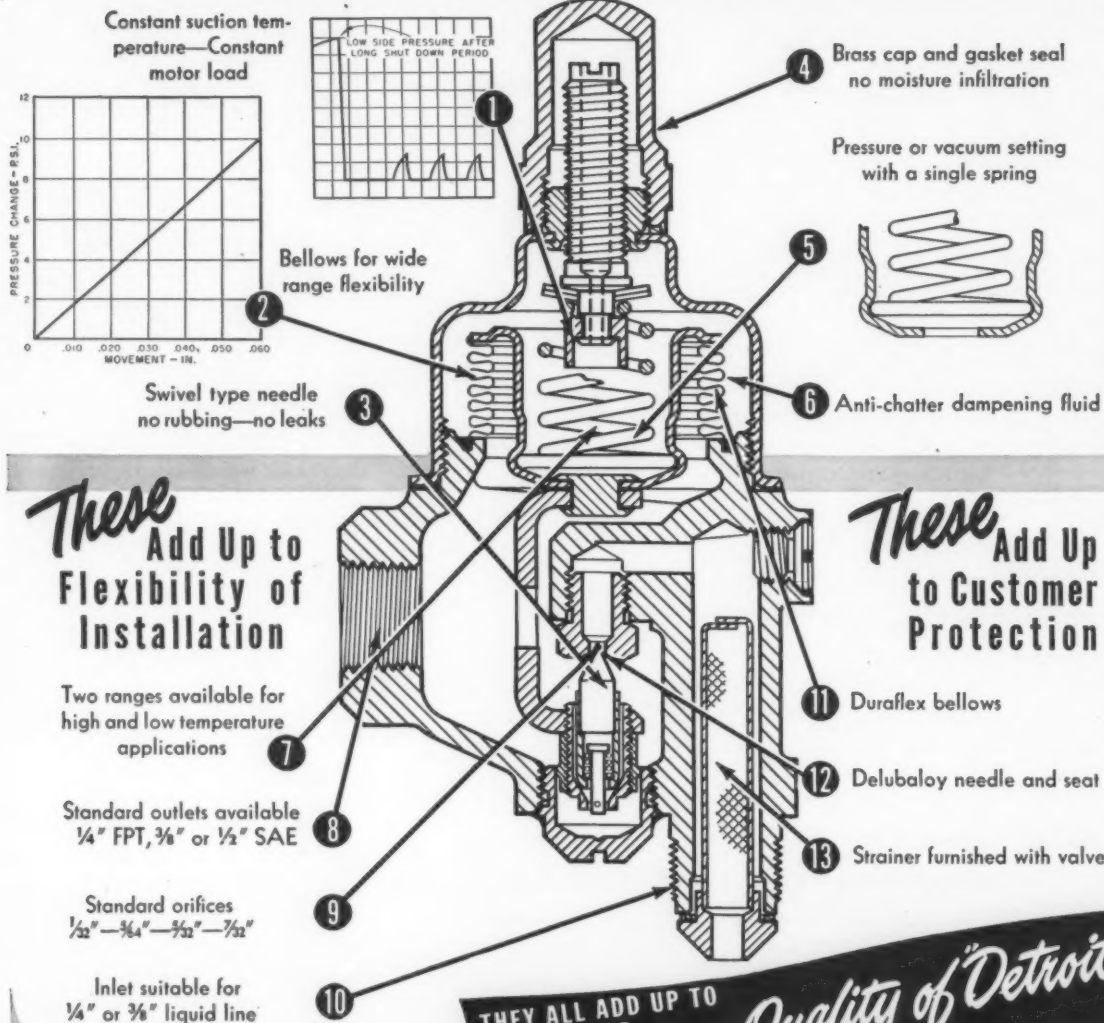
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Lets Analyze Quality

"Detroit" No. 672
Automatic Expansion Valve
.35 to 3.5 Tons Freon-12

These Add Up to Perfect Refrigerant Control



DETROIT LUBRICATOR COMPANY



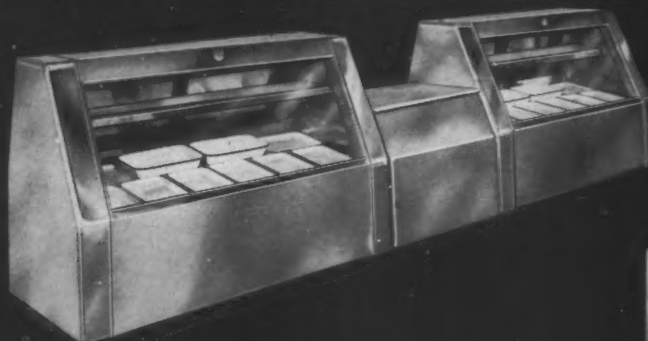
General Offices: 5800 TRUMBULL AVENUE, DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

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"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

*Why do Customers Warm Up
to MORTON Coolers
of SATIN-FINISH "35" MONEL?*



SHEER BEAUTY characterizes this Morton Coldlight Meat Display Case with its "35" Monel exterior.



QUICKER SERVICE, Greater Capacity, Faster Cooling are features of this fully-insulated Morton Bottled Drink Cooler with finish of satiny "35" Monel.



THIS ATTRACTIVE new Coldstream model . . . A Morton Reach-In Display Case . . . has both exterior and lining of lustrous "35" Monel.

Pictures cannot give you the answer . . .

But when you actually *see* how these cases beautify stores . . . and when you actually *see* how they set off displays of meat, fish, salads and other items . . . you'll quickly realize the tremendous sales-appeal of cabinets in satin-finish "35" Monel®.

More than that . . . Monel gives lifetime service. It's stronger and tougher than structural steel. It cannot rust. It resists corrosion by fats, food acids and alkalis. Ordinary cleansers readily keep "35" Monel cabinets spotless and shining.

And remember, Monel is solid metal *all the way through* . . . there's no coating to chip or crack . . . nothing to peel or wear off.

By using "35" Monel, MORTON SHOW CASES, INC., of Washington Court House, Ohio, makes permanent the sleek sales-appeal of these coolers. No wonder Morton coolers are so popular everywhere!

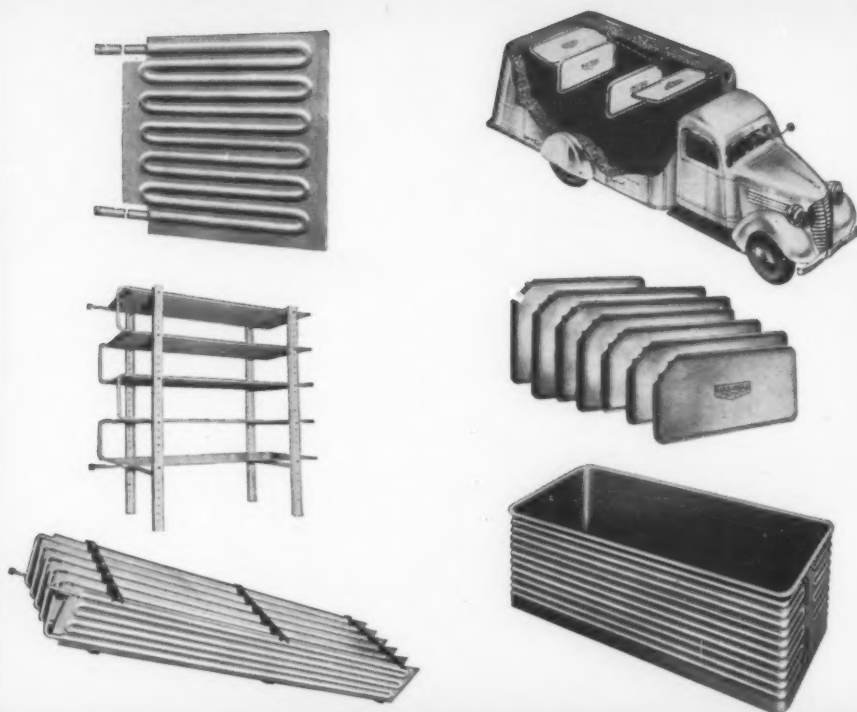
Remember Monel for beauty, economy and product protection wherever food and food products are handled.

*Reg. U. S. Pat. Off.

"35" MONEL® THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

KOLD-HOLD *Design*

opens the door to Refrigeration Profits



KOLD-HOLD "Quick Action" Serpentine Plates have a multitude of applications and combinations . . . all profitable to the user. Used separately, in banks, in plate stands, or as cabinet liners, they assure you the following advantages.

1. Easy installation.
2. Maximum prime surface.
3. No possibility of short circuiting the flow of refrigerant, which flows in one continuous pass from inlet to outlet.
4. Highest rate of plate heat acceptance.
5. Oil logging positively prevented.
6. Minimum pressure drop.
7. Tested under pressure.
8. An appreciably higher "K" factor.
9. Thoroughly cleaned and dehydrated.

KOLD-HOLD

Jobbers in Principal Cities

KOLD-HOLD MANUFACTURING COMPANY - 503 E. HAZEL ST., LANSING 4, MICHIGAN

PROCESSING **TRANSPORTATION**
protects every step of the way

STORAGE

THE REFRIGERATION INDUSTRY

"Positive Lubrication"

**Another Reason Why
You'll Make More Profits**

With the

CURTIS

**REFRIGERATING AND
AIR CONDITIONING
LINE**

The patented Curtis "Centro-Ring," self-oiling system of positive pressure lubrication assures longer life and lower maintenance for Curtis Condensing Units and Air Conditioners. This is only one of many reasons why the Curtis line is easier to sell and keeps customers sold—making Curtis a more profitable line for you.

Other Curtis advantages include:

1. Timken Bearings.
2. Extra large condensers.
3. Slow speed operation—quiet performance.
4. Finest materials—precision construction.
5. Full range of sizes and capacities.

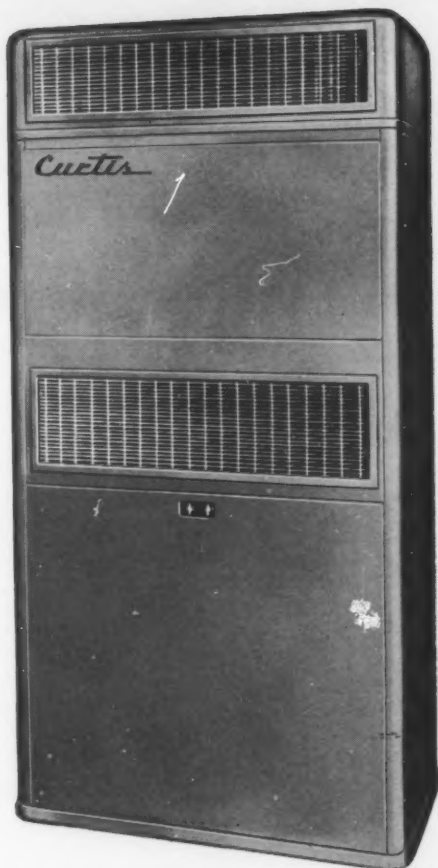
Write for full information on the complete Curtis line of Refrigeration and Air-Conditioning equipment.

CURTIS

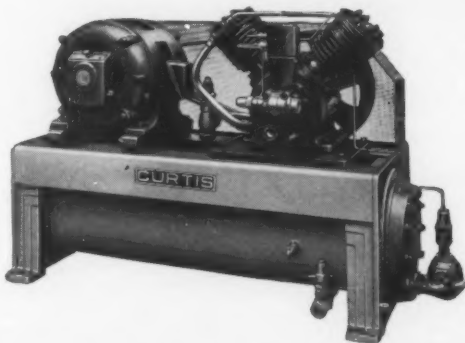
REFRIGERATING MACHINE DIVISION
of Curtis Manufacturing Company

1915 Kienlen Ave., St. Louis 20, Missouri

93 Years of Precision Manufacturing



Curtis Self-Contained Air Conditioners—
3, 5, 7½, 10 and 15 tons.



Curtis Condensing Units—¼ to 30 H.P.
Air and Water cooled.

Only

THERMOBANK

by **KRAMER**

*Keeps Coils Frost-Free
Automatically
at Any Temperature
without*

LABOR
ATTENTION
ELECTRIC HEATERS
BRINE OR WATER SPRAYS

Write for Catalog R124



KRAMER TRENTON CO. *Trenton, N. J.*

YOUR WHOLESALER HAS THEM RIGHT NOW

No more shortages!

There are no more shortages of Mueller Brass Co. valves, fittings and accessories for refrigeration purposes. The condition which we have all had to endure through the war years, and the building-up period, has ended.

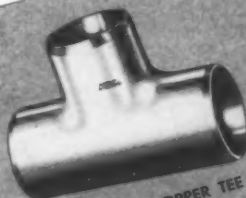
We know what every jobber has had to put up with in his efforts to get the material he wanted—we realize, also, the trouble that the service engineer has faced to complete his jobs. We are now happy to say that our line is exceptionally complete.

Service engineers can place full confidence in Mueller Brass Co. time-tested valves and fittings. Strict laboratory control, skilled engineering, highest quality materials, precision workmanship, and rigid inspection, combine to make these products constantly dependable.

**ORDER FROM YOUR WHOLESALER.
HE HAS THEM NOW.**



FLARE TEE



WROUGHT COPPER TEE



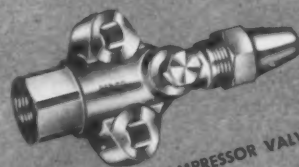
UNION COUPLING



HALF UNION ELBOW



PORT-IN-LINE VALVE



ADJUSTABLE COMPRESSOR VALVE



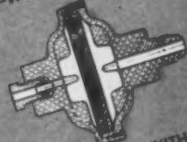
TWO-WAY DIAPHRAGM VALVE



DOUBLE PORT LIQUID INDICATORS



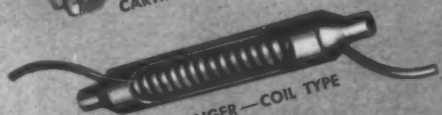
DIAPHRAGM ANGLE VALVE



LINE FILTER WITH CAPILLARY TUBE CONNECTION



CARTRIDGE TYPE ANGLE DRIER

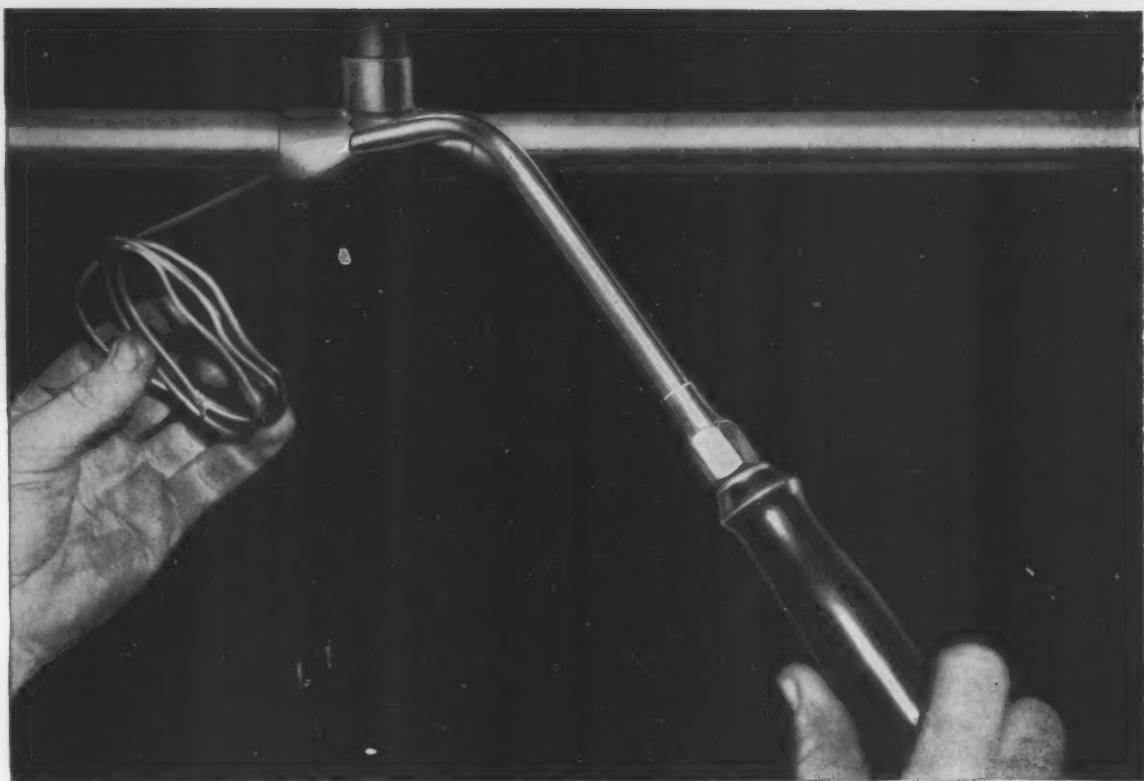


HEAT EXCHANGER—COIL TYPE



HEAT EXCHANGER—FOUNTAIN TYPE

**MUELLER
BRASS CO.**
PORT HURON,
MICHIGAN



PREST-O-LITE TORCHES ***... can help YOU save money***

Plumbers aren't the only skilled repairmen to discover that PREST-O-LITE heating, soldering, and brazing apparatus can save them money. Linemen, electricians, farmers, radio repairmen, refrigeration and air-conditioning servicemen, and automobile mechanics, all know that PREST-O-LITE torches light instantly and burn steadily with a clean, hot flame, using nothing but air and acetylene. They will tell you that


you can work in close quarters and direct the flame as easily as pointing a pencil. You can work on difficult overhead jobs with a minimum of fatigue, because PREST-O-LITE torches are light, easy to handle. You can do more jobs better, in less time, with the help of a PREST-O-LITE outfit. Ask your jobber to demonstrate the many ways that you can use a PREST-O-LITE outfit to make more money.

Linde
Trade-Mark

Products of

THE LINDE AIR PRODUCTS COMPANY

Unit of Union Carbide and Carbon Corporation

30 East 42nd Street  New York 17, N. Y.

In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

The words "Linde" and "Prest-O-Lite" are trade-marks of The Linde Air Products Company

THE REFRIGERATION INDUSTRY

IMPERIAL TRIPLE-SEAL FLARE FITTING

*the BETTER fitting
for refrigeration
work*

For extra protection against leakage the Imperial Triple-Seal Flare Fitting has a groove in the seat which brings you triple-seal tightness in every joint.

Here is how it works. When the flare is drawn against the groove, the copper tubing is extruded into the groove making a tight, self-sealing joint. This joint will remain leakproof even though the face of the seat may be nicked or marred. This Triple-Seal feature is included on all sizes $\frac{3}{8}$ " and larger.

Extra length pipe threads on pipe connections provide new further protection against leakage . . . these threads are longer than formerly on sizes $\frac{1}{4}$ " and over, and conform to the latest SAE standards. This extra length is especially valuable where reconnection is necessary as it provides for additional take-up.

Today, more than ever before, the Imperial Diamond "I" on fittings is your assurance of top quality.

THE IMPERIAL BRASS MFG. CO.
534 S. Racine Ave., Chicago 7, Ill.

IMPERIAL



**TRIPLE-SEAL
GROOVE**

**EXTRA LENGTH
PIPE THREADS**



The flare extrudes
into groove making
leak-proof joint.



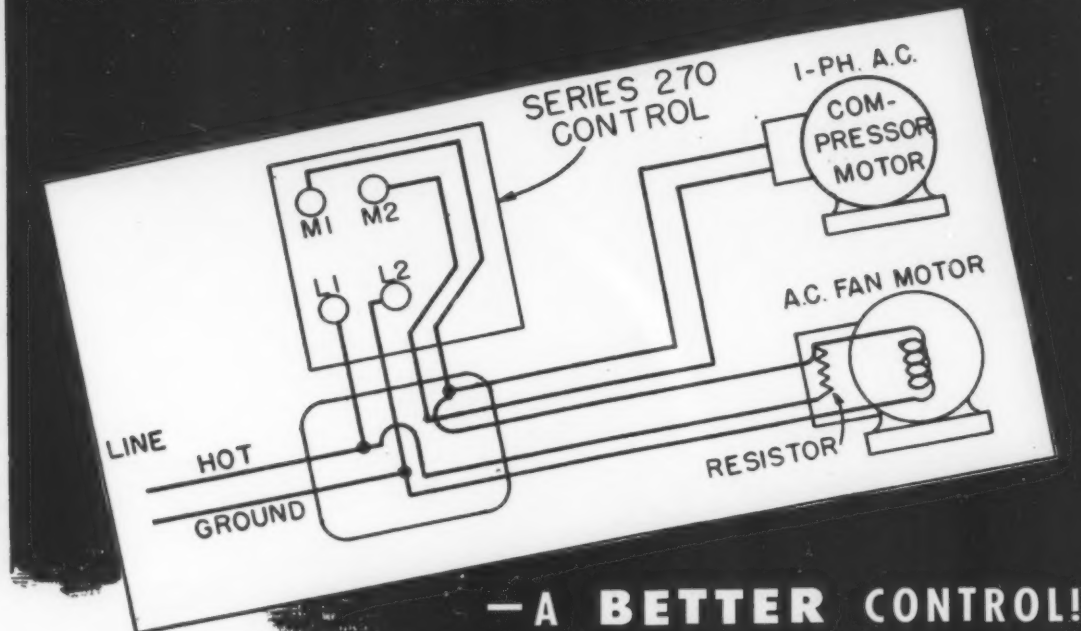
(Left) Ordinary flare fittings have only one seal.

(Right) Imperial Triple-Seal Flare Fittings have three seals to give you new, extra protection against leakage.

**FITTINGS • VALVES • DRIERS
FILTERS • FLOATS • CHARGING
LINES • TOOLS FOR CUTTING,
FLARING, BENDING, PINCH-OFF,
SWEDGING, REFACING**



FOR WALK-IN COOLERS, DISPLAY CASES, ETC.



—A BETTER CONTROL!



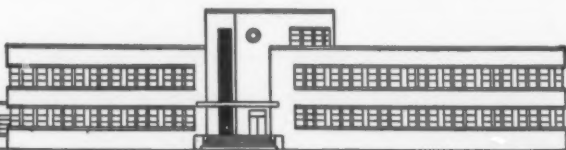
Series 270 and 272 PENN "Single" temperature or low side pressure controls. Also (not shown) Series 271 and 273 PENN "Dual" Controls which combine in one unit a temperature or low side pressure actuated mechanism and built-in high pressure safety cut-out.

It gives greater dependability! It gives more efficient operation! So it's only natural that more and more refrigeration and air conditioning men want to use the new PENN 270 Series Control for all types of applications.

Here, for instance, is a special AC hookup for walk-in coolers, display cases, etc., with "high-low" speed circulating fan. Note that the resistor (or reactor) is wired in such a manner that it is shunted when switch contacts are closed. This causes "high" speed fan operation during compressor "on" periods; during compressor "off" periods, the resistor is in series with fan motor, causing "low" speed operation.

Never before did any control provide so much versatility, simplicity, efficiency and dependability. Investigate the PENN 270 Series Control. *It's the first and only refrigeration control to have a load-carrying, 2-pole switch.* You'll agree that it's new! It's different! It's better! Write **Penn Electric Switch Co., Goshen, Indiana.** In Canada: **Penn Controls, Ltd., Toronto, Ontario.** Export Division: 13 E. 40th Street, New York 16, U. S. A.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

THE REFRIGERATION INDUSTRY

BTU

News • Laws • Trends

● **Carrier Holds "Open House".** Carrier Corp. held Open House recently at its huge new plant in Syracuse, recently acquired from the War Assets Administration as part of its expansion program in the manufacture of air conditioning, refrigeration and industrial heating equipment. A crowd of about 20,000 persons visited the plant, to see the three 800-foot long assembly lines for producing centrifugal compressors, and an ultra-modern industrial painting job.

Interior walls are done head-high in deep maroon, with the upper 30 feet of wall space in cream, the ceiling white, all of the machines green, and all danger parts, such as crane hooks, colored burnt orange. The new plant adds 600,000 sq. ft. to Carrier's previous 1,000,000 sq. ft. space.

● **The Outlook for Gas.** Gas utility companies estimate that their sales and that of dealers in their territories will total 1,464,000 gas refrigerators in the three-year period 1947 to 1949 inclusive. This estimate, of course, assumes a sufficient supply of units to meet all demands.

By year, the estimate of gas refrigerator sales lines up as follows: 1947, 439,400 units; 1948, 501,200 units; 1949, 523,400 units. Utilities also estimate gas air conditioner sales of 3,400 units this year, 5,600 in 1948, and 7,700 in 1949.

● **They're in the "Act," Too.** This was an eyebrow-raiser to us; perhaps it will be to you, too. According to *Building Supply News*, no less than 3,500 lumber and material dealers are supplying refrigerators and other appliances to builders and retailing them to consumers. The magazine estimates, also that about 94% of all builders buy their supplies through these dealers.

With new home building going ahead like blazes, the builder is a "buyer" that long-time refrigeration dealers simply can't afford to ignore. Have you been pushing this part of your prospect list as hard as you should? If not, you'd better.

● **Putting Water Coolers to Work.** Six hundred workers, and not one has to walk more than 50 feet to get a drink of cool, refreshing water. That's the way it is at the Columbus, Ohio, plant of Ranco, Inc. Spokesmen for water cooler manufacturer members of REMA point to the Ranco plant as an excellent example of a modern industrial plant properly equipped with water coolers. Ranco uses 14 ten-gallon bubbler type coolers scattered throughout its plant, from lobby and offices to assembly

lines and cafeteria. E. C. Raney, Ranco president, says the coolers pay out in increased efficiency of both shop and office employees. In these days of higher labor costs, water coolers can be real cost-cutters by helping to save time, improve health and morale, and upping worker efficiency.

● **Materials Handling: An Important Field.** More than a dozen topics of interest to the refrigeration industry will be discussed at the Conference on Materials Handling which will be a feature of the second National Materials Handling Exposition to be held in the Cleveland Public Auditorium January 12 to 16. Major theme will be cost reduction through improved handling.

Discussions which will interest refrigeration men are: "Arranging Stock for Effective Handling"; "Handling Factors in Plant Layout"; "Planned Packing for Efficient Handling"; "Handling Unusual Shapes"; "Vertical, Horizontal and Inter-Floor Handling"; "Handling Bulk Products", and "When Manual Operations Pay".

HOTEL LINEUP FOR THE SHOW

Assignment of hotel rooms for the Fifth All-Industry Show and the various association meetings which have been scheduled in connection with the event has been set. All reservations are being cleared through the Cleveland Convention Bureau, and the various associations have been assigned to the following hotels:

REMA members and other exhibitors: Hotels Cleveland and Carter.

REWA members: Hotel Statler.

NARC members: Hotel Allerton.

RSES members: Hotel Hollenden.

NSCRA members: Auditorium Hotel.

By assigning association members to definite hotels, and handling all room assignments through a single office, duplications will be avoided and many more rooms made available for Show-goers.

● **Brochure on Psychrometry.** Just made available by American Society of Refrigerating Engineers is the *ASRE Brochure on Psychrometry*, preprinted from the 1948 basic volume of the Refrigerating Data Book, and including data designed to simplify engineering calculations in psychrometry.

The new brochure has three complete charts covering the low, normal and high-temperature ranges. Copies may be had at \$1 each from ASRE headquarters, 40 West 40th St., New York City.

● **A Real Food Bank.** A Memphis, Tenn., locker plant, which terms itself "your food bank", is operating just like an actual bank—under supervision of the state banking department. In order to use the word "bank", the locker plant had to comply with state banking regulations, and it has enterprisingly turned its situation into a merchandising asset. Bonded tellers receive or disburse the customers' food. Customers aren't admitted to the food vaults, but are given statements of their food balance. Accounts of each customer's food supply are tabulated, just as would be the case in a bank.

Refill with the Best Oil You Can Buy



SUNISO REFRIGERATION OILS...

Custom-Made for Refrigeration Industry, First Choice with Makers of Original Equipment

For many years the refrigeration industry has practically standardized on Suniso Refrigeration Oils. In fact, the larger manufacturers of refrigeration equipment probably use more Suniso oils than the total of all other brands.

Suniso oils are now available through leading distributors. Six different grades cover the needs of every type of refrigeration and air-conditioning equipment.

Suniso oils are exceptionally low in moisture content (less than 30 parts of water in 1,000,000 parts of oil). They are unusually stable and do not react with new types of refrigerants, such as the Freons and methyl and methylene chloride. Crystal clear, characterized by a high degree of purity, they offer the service-man maximum assurance of trouble-free lubrication.

For further information about Suniso oils and the lubrication of refrigeration and air-conditioning equipment, write Department RI-12.

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SUN

**INDUSTRIAL
PRODUCTS**

THE CASE FOR CANDY COOLING

A leading candy manufacturer points the way toward making candy retailing a more profitable year round operation through dramatic merchandising of the product in properly refrigerated display cabinets

By John E. Hubel



A young customer beams approbation as a clerk in Hayek's drug store, Milwaukee, Wis., solves his gift problem by suggesting to him a box of properly preserved chocolates from the store's "air conditioned" candy case.

MAKING more money from the sale of candy the year around is the business of the Robert A. Johnston Co. of Milwaukee and New York, one of the nation's larger candy manufacturers. And specially designed refrigerated display cases for the retail sale of Johnston confections now are playing a big part in helping this company to achieve its goal.

In the course of its 100 years in the candy business, the Johnston firm has seen and employed virtually every type of candy merchandising plan that has been developed during that time. Now, on the basis of its century of practical experience, the company has decided that the use of modernly styled, efficiently engineered, "air conditioned" display cases is the most

adequate answer to today's candy merchandising problems.

The refrigerated cabinet adopted by the Johnston firm is now being manufactured in quantity by the Manitowoc Equipment Works, a division of the Manitowoc Shipbuilding Co., which specialized in the construction of U-boats during World War II.

This cabinet has been thoroughly tested by the Johnston Company since the first of this year, and company executives report that the unit has performed with complete satisfaction. A decidedly increased volume of Johnston candies were merchandised through these cases installed in sev-

eral different types of retail establishments in various parts of the country during the test period.

Design of this particular case, it is reported, was started in 1942, but along with many other projects had to be shelved during the war years. Early this year the case was redesigned to meet postwar conditions and then placed in operational service on the field test basis previously mentioned.

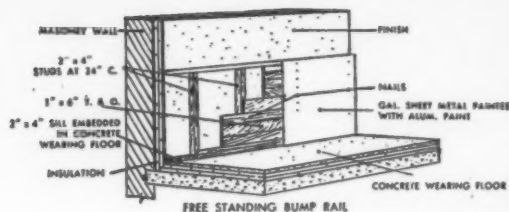
A survey of Johnston candy distributors in all parts of the country has convinced the company that there is a potential market for 60,000 of the new refrigerated cabinets as eye-catching self-service display and merchandising units in such locations as drug stores, groceries, cigar stands, railroad stations and other transportation terminals, hotels, department stores, and any other locations where candy is sold.

The Johnston company's present market includes not only every state

Continued on page 52

THE importance of refrigeration and air conditioning in the manufacture of chocolate coated confections was detailed in our October issue in a story entitled "A Sweet Installation". Now we're carrying this idea a step further by pointing out to you in this article how one major candy manufacturer is profitably applying the use of cooling equipment to his retailing setup as well.

HOW TO PREVENT DAMAGE TO INSULATION



1.

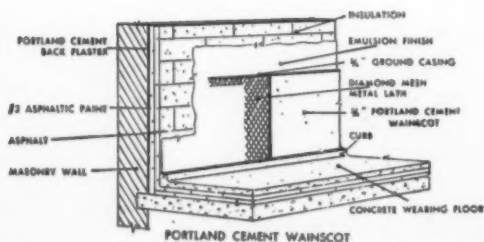
EVERY good refrigeration contractor knows that it is to his own best interest to install his jobs in such a way that they will afford maximum service and satisfaction to his customers. One important opportunity for "job insurance" of this type which is frequently overlooked is the protection of exposed insulation in installations involving large refrigerated storage areas.

Damage to such insulation from wheeled trucks, abrasion, and ordinary wear and tear can be very costly to the owner of these refrigerated facilities. Punctures can cause leakage which will permit moisture penetration into the insulation, resulting in excessive refrigeration costs. Water collecting in these breaks will eventually destroy the insulation structure.

Prevention of this damage is comparatively easy and relatively inexpensive, especially if the work is done at the time of the original construction. The diagrams on these pages show the construction details of the various protective devices used today. Most of them can be readily added to existing installations at any time.

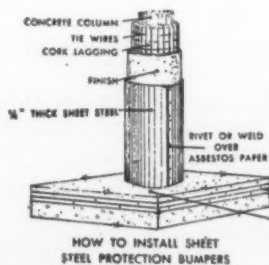
1 This is the diagram of a free standing bump rail covered with galvanized sheet metal. The 2 x 4-inch studs rest on a 2 x 4-inch sill embedded in the wearing floor. Studs are anchored by 2 x 4-inch blocking cut to length and wedged between each stud. Tongue and groove sheathing is nailed on and covered with the metal sheeting.

5 This shows how to apply a protective portland cement wainscot in a low-temperature room which has an asphalt emulsion finish. As a key to hold the portland cement plaster, diamond mesh metal lath is stapled to the insulation over the emulsion finish and topped with a cap strip.



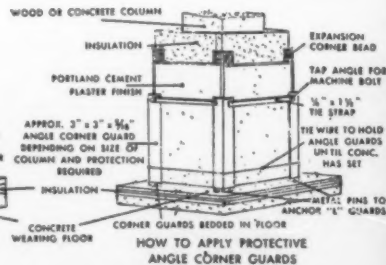
5.

6 Columns are particularly subject to damage, and round columns usually are protected with sheet steel. The steel may be either riveted or welded. If welded, apply asbestos paper over the finish before the steel guards are put into place to prevent heat damage to the finish and insulation.

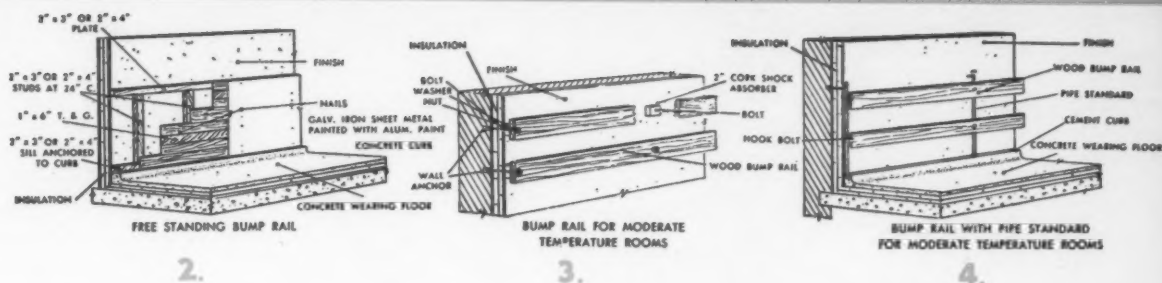


6.

7 The corners of square columns usually are protected with iron angle guards approximately 3-feet high with expansion corner beads above the guards as high as desired. Angle irons embedded into the concrete wearing floor are bolted together at the top with tie straps usually 1/4-inch thick.



7.



2 This bump rail, constructed to protect a solid corkboard partition, is a variation of the one shown in Fig. 1. The only difference is that the wooden sill is securely fastened with anchor bolts to a concrete curb which in many cases is poured at the same time as the concrete wearing floor.

3 Bump rail for moderate temperature rooms. Horizontal rails are anchored by bolts through the insulation into the masonry wall. A 2-inch piece of corkboard coated with asphalt or emulsion is slipped over each bolt, not only to act as a shock absorber but also to minimize frosting on the bolt.

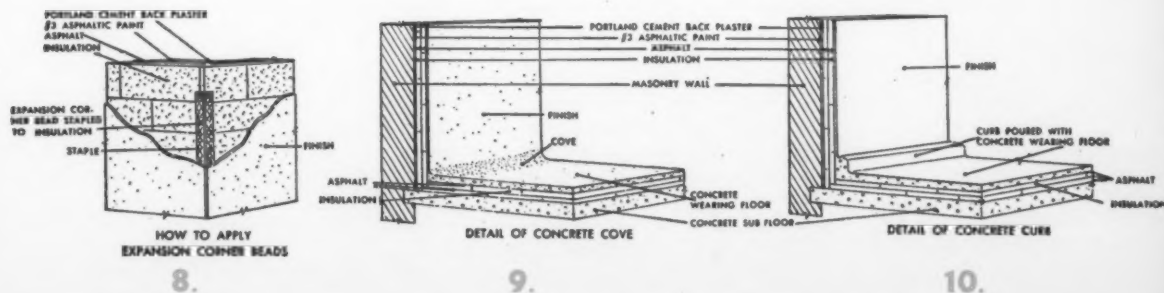
4 The wood members of this bump rail (also for moderate temperature rooms) fasten to pipe standards sunk into the concrete curb. The bolts at the top of the pipe standards are anchored into the masonry wall and the wood bump rails are fastened to the upright standards with hook bolts.

Editor's Note: Illustrations and explanatory material for this article were provided by the Building Materials Division of Armstrong Cork Co.

8 This diagram shows how the expansion corner beads mentioned in the discussion of Fig. 7 are installed. Although the corner bead shown here is being used on the corner of a wall, construction details are the same when used on columns. Use sufficient staples to firmly anchor the beading.

9 Concrete wearing floors should be slightly coved to the side walls to prevent moisture, which may collect on the floor, from seeping into the insulation at the juncture of the floor and wall. This is easily done when pouring the floor. Diagram indicates approximate degree of coving necessary.

10 A concrete curb poured at the same time as the wearing floor will protect the finish and the insulation from many damaging blows from wheeled trucks and at the same time protect the insulation from water seepage. Curbs are usually 4 x 4 inches, unless unusual conditions prevail.





Pattern for

Tomorrow's Meat Market?

The growing trend toward pre-packaging of fresh meats for self-service retail sale, and the tendency of corner butcher shops to install frozen food lockers in their stores, is exemplified in this Denver market

TYPICAL of one of the new trends in food merchandising—and one of the new profit opportunities for commercial refrigeration dealers—is the 100% refrigerated combination self-service meat market and locker plant operated by Duane Horney in Denver, Colo.

One of the most neatly "packaged" food retailing operations in the country, Horney's Locker Storage Co. is the realization of the "postwar dream" of Mr. Horney himself, who planned this combination setup while doing a stint with the U. S. Merchant Marine during the war. Basing his

decision on his 10 years of experience in operating conventional clerk-service butcher shops, Mr. Horney launches his new venture in January of this year.

His first step was to sell all of his former meat display cases and to replace them with a series of 12-foot open type self-service cases obtained from Behrens Fixture Co., a local manufacturer of such equipment. Each of these cabinets is equipped with its own 2-hp compressor and can be used to accommodate either meats or dairy products, according to the need. These cases are arranged back

An interested customer inspects a sample of the pre-packaged meats available in the Horney self-service market and locker plant.

to back down the center of the store's sales floor, with a single case set across the rear of the store to separate the self-service area from the meat cutting room.

This meat cutting room is fully equipped with meat saw, tenderizer, grinder, chopper, and other necessary paraphernalia for the pre-packaging of fresh meats. Also located in the rear of the store is a 12 x 16-foot walk-in cooler capable of holding seven sides of beef, and a 16 x 20-foot walk-in which also is used for bulk storage of meats.

Three butchers now cut and package a sufficient quantity of meats to maintain a sales volume of around \$190 per day throughout the week and upwards of \$250 on weekends. Packaging, after many experiments and mistakes, has been solved with M.S.A.T. 80 and M.S.T. cellophane, heat sealed and heat labeled around each cut of meat.

The Horney organization makes no charge for the cellophane packaging of the meats which it retails under the self-service plan, figuring that the added weight on the scale will cover the cost. And besides, they are just a bit leery of further affronting cus-

Continued on page 51



*Faithful!**

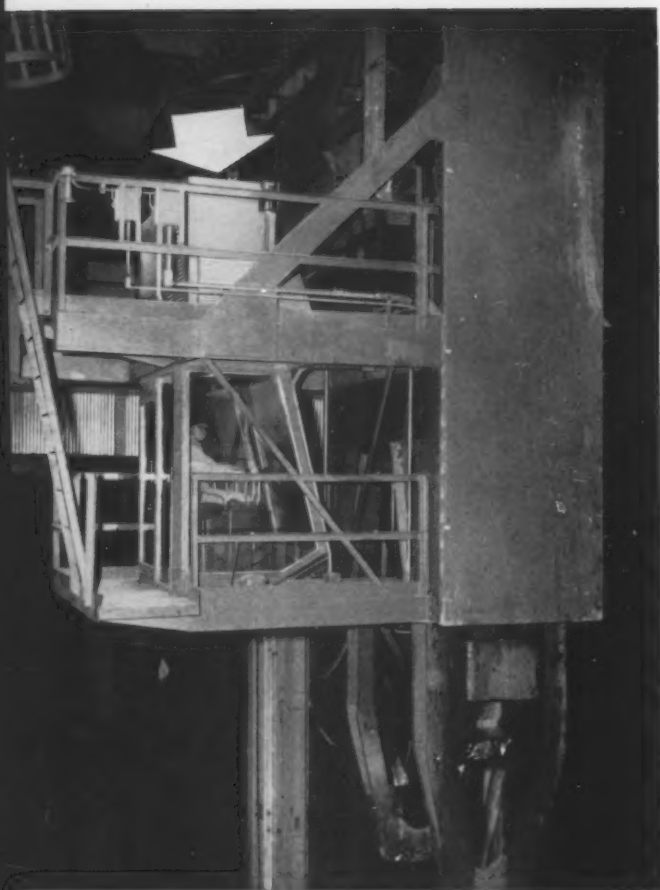
Once every 64 minutes, preceded by a deep-throated rumble and an earth-shaking growl, Old Faithful casts steam and boiling water toward the blue Wyoming sky. Its beauty and its regularity combine to make this geyser one of nature's greatest wonders. Visitors to Yellowstone National Park are awed and delighted by this natural clock which, within the memory of man, has not deviated from its self-regulated schedule.

* *The kind of performance delivered by Mills Condensing Units.*

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Red Hot Refrigeration



It was a hot spot, before refrigeration—but now the operator of this crane cab at Ford's River Rouge plant works in complete comfort as the temperature outside soars to 150 F.

USING air instead of the usual water for condensing purposes, an "air-conditioning" unit in the cab of a 250-ton stripper and extractor crane at the River Rouge plant of the Ford Motor Company permits the operator to perform his duties in complete comfort while the temperature outside the cab soars to 150 F.

Industry has long been confronted with the extreme conditions under which operators of cranes handling hot metal have to work. Not only are the temperatures very high, but often

there also are noxious fumes, gases and dust.

For years attempts have been made to alleviate these conditions, but a moving cab, under such extreme conditions, presented many problems. Large fans were tried, but they gave very little temperature relief. Wetted burlap was hung over the fan's intake, and while this cooled the air a few degrees it did not remove the fumes and gases. The practice also involved lost time in supplying sufficient water in the moving cab.

Thanks to mechanical cooling equipment, operators of hot metal cranes—premium-wage workmen—now can work a full eight-hour day in comfort despite outside temperatures that often reach 150 F. What's more, they feel better than they used to after only brief exposure to the steam, heat, fumes and vapor they formerly had to battle. Here's another "first" for refrigeration in solving what used to be a tough problem

To improve upon this plan, air was blown over cakes of ice, but the disposal of water resulting from melting ice added another problem. Besides, the ice melted quickly and time was again lost in replenishing it.

The first real attempt at "air-conditioning" crane cabs was in the use of dry ice. This was more effective than earlier attempts, but it offered no control over the temperature and still did not remove the fumes and gases. Later, air conditioning units employing water for condensing purposes were built, but these were bulky and comparatively inefficient. The water in the storage tank built on top of the cab would become so warm that it was almost impossible to condense the refrigerant.

In 1943, Dravo Corp. of Pittsburgh developed an installation that used air as a condensing medium and required only electrical connections for operation. Fume removal equipment also was incorporated in the unit. The need for ice, water, water storage tanks and piping, with their high maintenance costs and lost time, was eliminated.

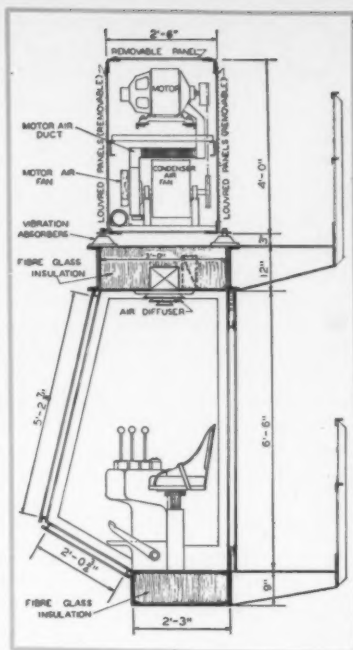
A typical installation of this Dravo equipment is that at Ford's River Rouge plant where the crane handles red hot ingots.

The cab itself was specially designed and built to afford good insulation as well as full vision for the operator. All four sides of the cab are shielded with two pieces of sur-

face hardened plate glass set one-half inch apart. The outer glass also is heat absorbing. This construction represents a reduction of approximately 37% of the normal amount of heat transmitted by conduction through the glass area, exclusive of the radiant energy of the hot steel being handled. The effectiveness of the glass insulation increases as the temperature of the operation increases. The floor and roof of the cab incorporate hollow compartments packed with fibre glass for insulation.

This construction of the cab permits a temperature of 85 F to be maintained during the cooling season when subjected to 135 F ambient temperature, and 70 F during the heating season when the outside temperature is 0 F.

The air conditioning unit built by Dravo for this cab was designed to meet these performance requirements and also provide the means for removing fumes, gases and dirt from the air supplied to the cab. In 1943 Dravo had constructed an air conditioning unit using air for condensing purposes for a crane operating over lead vats. This is believed to be the first installation in which air was used instead of water. The results of these experiences brought out the basic fact that a practical unit had to be rugged and heavily constructed, and that the cooler should have capac-



Cross-section view of the Dravo crane cab cooler, showing how the conditioning equipment is mounted atop the cab. It supplies cooling in summer, heat in winter.

ity greatly in excess of the theoretical calculated capacity.

The frame of the cooler for Ford's stripper crane cab is composed of 3 x 1/4-inch angles with 4 x 1 1/2 x 1/2-

inch channel horizontal supports, all of welded construction. The entire cooler is supported at each corner on shock absorbers to assist in relieving the vibration, shock, and jarring to which the equipment is subjected.

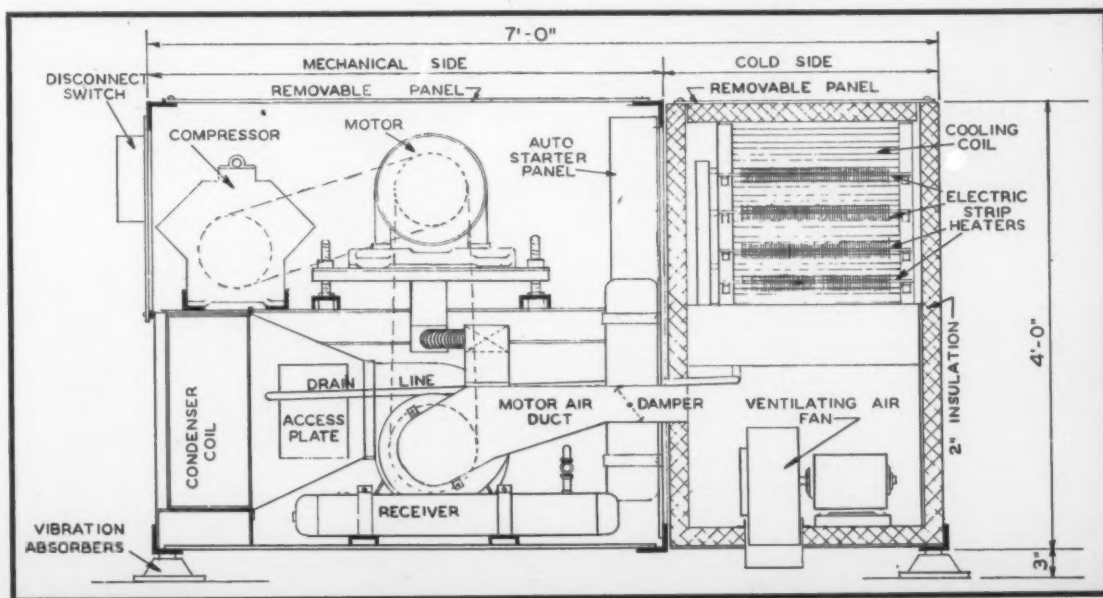
The cooler is divided into two compartments, the cold side in which the air supplied to the cab is conditioned, and the mechanical side in which is located the refrigeration equipment, compressor motor, contactors, and starters.

The cold side is a box insulated with 2 inches of fibre glass. Approximately 100 cfm of make-up air is introduced into the unit through a dust filter and also through activated carbon cannisters for removing fumes and gases. This make-up air mixes with approximately 300 cfm of re-circulated air and passes over the cooling coil into the ventilating air fan which operates continuously. A total of 400 cfm of air is discharged through an air diffuser into the cab, and since only 300 cfm is returned to the cooler, a pressure is built up within the cab.

An air diffuser was selected that would permit a sufficient air movement along the inside face surfaces of the cab in order to create a cooling effect and also to reduce the radiant effect generated by abnormally high temperatures. Also it had to give a

Continued on page 50

Here is a longitudinal section view through the crane cab cooler, showing relative locations of "mechanical" and "cold" sides. "Cold" side has 2" of fibre glass insulation, and has filter and activated carbon cannisters for removal of dust and fumes. Despite its compactness, all mechanical parts are said to be readily available for servicing.



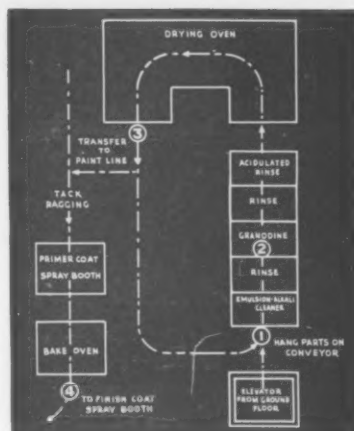
WHAT YOU *Don't* SEE

THE extent to which manufacturers of refrigeration equipment go to insure high quality in their finished products is shown in these pictures taken in the plant of Seeger Refrigerator Co., St. Paul. By phosphate-coating refrigerator cabinets prior to application of the white enamel exterior finish, they are protected to a high degree from the usual corrosive influences of the kitchen, the staining effects of light and heat, and the spread of rust beyond areas exposed by accidental damage of the enamel. The practice also effectively conditions the metal surface for good paint adhesion. At Seeger, the chemical used for phosphate coating is cold spray "Granodine", a product of the American Chemical Paint Co.

Key points in the process are illustrated in the flow diagram at right. Numbers indicate those steps which are pictured on these pages.

There is a "quality story" that the buyer doesn't see in the finished product. It's a good point to bring out in your sales presentations.

*Trade Mark Reg. U. S. Pat. Off.



1 In STEP 1, shown at left, refrigerator shells and other component parts, after being formed on the ground floor, move on a conveyor line to the floor above for finishing, entering first the emulsion-alkali cleaning chamber. Here the parts are treated to give them a chemically clean surface, so that the coating chemicals to be applied later function most uniformly and efficiently.

Inherent cleaning action of the emulsion-alkali cleaner is augmented by the impingement of spray under pressure, which removes oil, grease, gross surface oil and other contaminants remaining after the forming operations. The entire metal treating process is an automatic operation, the parts moving at a speed which permits about a one-minute exposure to spray impingement in each chamber.

2 After rinsing to remove all possible traces of alkali, the work enters the phosphate-coating chamber (shown in STEP 2 at right). As the work comes in contact with the coating spray, a chemical reaction occurs which transforms the entire metal surface into a film composed of millions of tiny crystals whose slight irregularities constitute an effective grip or "tooth" for the enamel.

The "Granodizing" coating spray used here can be applied at temperatures ranging from 110 to 115 F and a satisfactory coating developed in a minute, it is claimed, economizing in steam consumed and heating facilities required. Also, since the coating solution does not give off rust-stimulating vapors, there is less tendency toward blushing if the work is stalled in the humid spray booth.



A clean water rinse follows the coating process, after which comes an acidulated rinse in which the pH is adjusted to counteract alkali present in main water and to cause the metal surface, on drying, to be slightly acid—a favorable condition for satisfactory paint adhesion.

3

At the exit orifice of the power spray washer, the refrigerator parts emerge briefly into the open and then pass directly to the drying oven, an oil-fired direct heat unit maintained at 350 F and shown in STEP 3 at right. The enclosed passage of the drying unit makes a U-turn and the parts which come from it are transferred from the process line to the finishing line.



4

Parts are next given a primer coat of enamel, which is baked on at 380 F in an oven heated by a two-stage indirect oil-fired and gas combination heating unit. After being cooled as shown in STEP 4 and tack-ragged to remove dust, parts enter the finish coat spray booth, where they undergo treatment and baking similar to that employed for the primer coatings.

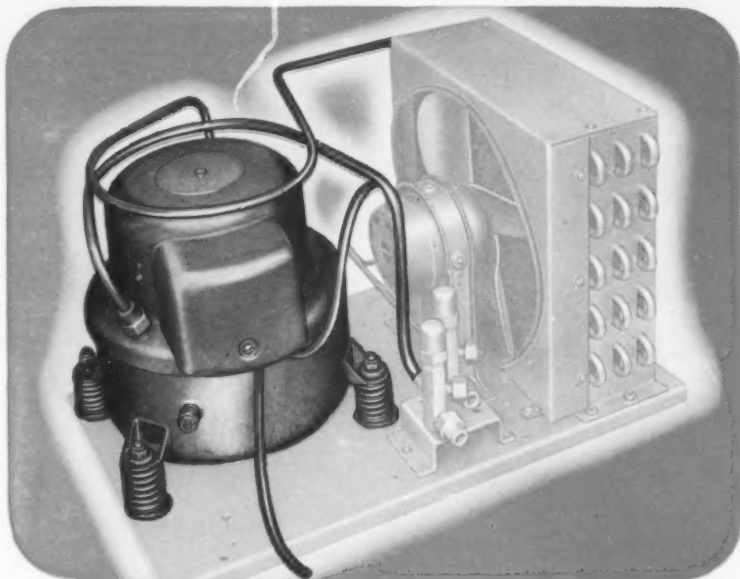
Finished and inspected, the parts are sent on to the assembly lines where, as shown below, they are assembled into display cases and reach-in cabinets, ready for shipment.



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HERE'S WHY

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- 3 Moving parts accurately balanced statically and dynamically.
- 4 All bronze bearings and highly finished case hardened crankshaft for years of operation.
- 5 Stator press-fit into body; rotor press-fit on crankshaft to assure permanent, accurate positioning.
- 6 Motor air gap and alignment accurately controlled.
- 7 Forced lubrication to all bearings—Longer, quieter operation.

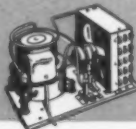


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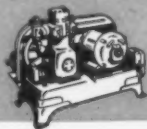
$\frac{1}{8}$ H. P.



TO $\frac{1}{2}$ H. P.

REMOTES

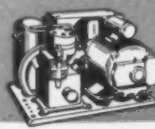
$\frac{1}{4}$ H. P.



TO 15 H. P.

SELF-CONTAINED

$\frac{1}{3}$ H. P.



TO $\frac{3}{4}$ H. P.

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COMMERCIAL *Refrigerator* SALES NEWS

While *The Refrigeration Industry* is not the official publication of the National Commercial Refrigerator Sales Assn., the Editors assign this space each month to the association. The information below is furnished, for the most part, by the offices of the association and its local affiliates.

Modernize Your Display Floor If You Want More Business, NCRSA Urges

By R. H. Muehlberg
Executive Secretary
National Commercial Refrigerator Sales
Association

SUCCESSFUL distributors and dealers of commercial refrigerator equipment have long known that today's prospect for such equipment is wisely becoming "modern store" minded.

He has had a first-hand opportunity to actually see the many advantages and steady increase in customers and business that modern merchandising methods and modern stores can produce. He has also had the advance benefit of knowing and seeing the efficiency with which the large super-markets and chain stores handle patrons through self-service displays and attractive floor layouts in his own city or community.

Thus, when shopping for new equipment, his mind will try to visualize just how the item will appear on his store floor, or behind his store counters. He must be able to picture the equipment from a standpoint of both efficiency and attractiveness in his own place of business.

Distributors and dealers of commercial

refrigerator equipment can do much to emphasize and instill in the mind of the buyer the efficiency and attractiveness of such items by reproducing, in part, modern store layouts in their own salesrooms.

On a recent trip covering four states, calls were made at some 50 commercial refrigerator outlets. Of the entire group, only one salesroom was attractive and suggested the new trend of modern merchandising methods from the buyer's point of view.

The majority of salesrooms visited were, for the most part, a combined office and storage space for the refrigerator equipment the firm handled. No effort had been made to display items properly, or to suggest additional purchases to the prospect, through any kind of salesroom modernization.

A Hazard, Not a Help

In a large number of instances, the showroom of the dealer created more of a sales hazard than a selling help. *Dirt and grease, carelessly smeared on refrigerator cases while unpacking, still remained. No attempt had been made to remove it before placing the item on the display room floor.*

Self-service cases at the rear of the store, or against the wall, were covered with dust



NCRSA vice-president H. B. Adams, owner of Adams Refrigeration Co., Inc., Tampa, Fla., demonstrates the placing of refrigerator equipment in his modernized showroom in that city.

and dirt accumulated after many days without either wiping or dusting. Used motors, pipe and miscellaneous parts cluttered the floor. At one such salesroom, an out-of-town buyer's wife was heard to remark, "This place looks more like a junk shop".

Display rooms and salesrooms of commercial refrigerator dealers and distributors such as this are typical throughout the country. They have entirely neglected to see the asset and advantage a clean, modern showroom would be in the marketing of such items.

In many places of business, the floors were so littered with service parts and old, greasy motors, that the prospect, intending to buy a refrigerator case, would have to be completely sold on the item before entering the store and then an expert high-jumper to be able to reach the case of his choice.

It is not the intention of the NCRSA to criticize the sales methods employed by any commercial refrigerator distributor or dealer.

Continued on page 81



NCRSA president George B. Herman demonstrates the advantages of his modern store display arrangement to R. H. Muehlberg, executive secretary, and Mike Bockmann, salesman for Allied Store Equipment Co., Minneapolis.



Showroom of the Midwest Equipment Co., Minneapolis, is shown above. Modern selling is the theme of this firm, with actual displays of items so that prospects can see the equipment from all angles of the display room.

SERVICE IS HIS SAL

24 HOUR REFRIGERATION SERVICE

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Please phone us when an emergency arises. A trial will convince you that we give "Service that Serves."

CHAS. E. HENDRICKS

MEMPHIS REFRIGERATION COMPANY

1275 Madison Avenue

Nights-Holidays Phone 2-2138

Day Phone 36-2788

(May we suggest that you tack this postal on the wall near your refrigerator for quick reference.)

Postcards like this, sent to prospects as well as customers of both sales and service departments, plug the firm's 24-hour service facilities. Similar copy is used in newspapers.

By Grier Lowry

Hub of the Memphis Refrigeration Co.'s operations is its service department. Here Charles R. Cox is shown at the service bench, while Ernest Cox works on a malfunctioning radio and L. L. Diffie repairs a faulty freezer.



Or how one enterprising Memphis building an aggressive merchant the rock-sound foundation of its

PPROMPT and reliable service is the key to profitable refrigeration selling, in the opinion of Charles E. Hendricks. And Mr. Hendricks has rather effectively proven his point by using just this formula in building the highly successful business of the Memphis Refrigeration Co., of which he is president.

This firm specializes in both household and commercial refrigeration service and sales, but rounds out its business by also selling and repairing heating equipment and a full line of appliances, both large and small. Or-

This exterior view of the company's head vitalized sales and display facilities. This n a widespread reputa



ESMAN

is refrigeration firm is
dising department on
A-1 service reputation

ganized in 1942 it has developed steadily, following closely along the lines of its firmly established policy, until now it is definitely a factor to be reckoned with in the refrigeration picture in this metropolitan Tennessee community.

Not long ago the company fittingly celebrated its growth and its progress by completely modernizing its showroom facilities and by launching an intensified merchandising program aimed at carrying the firm to even greater heights—and correspondingly increased profits. But despite this

new emphasis on sales, the service end of the business is being anything but neglected, for Mr. Hendricks has never forgotten for an instant that this is the cornerstone upon which his business success has been largely built.

One of the highlights of the showroom remodeling was the provision for completely segregated display facilities for commercial and household refrigeration equipment. Mr. Hendricks deliberately arranged to

Mr. Hendricks faithfully follows his policy of calling all new service customers to thank them for their patronage—and to lay the groundwork for future sales of equipment.

house these two sales divisions in separate sales rooms, for he firmly believes that prospects for these two types of equipment are distinctly different in their buying habits and consequently should be handled in different ways.

No effort was spared in making the new sales rooms attractive as well as efficient. Walls were painted in re-

ters shows the location of the firm's re-emphasis on sales follows years of building for reliable service.

Sales and service employees of Memphis Refrigeration Co. rub shoulders literally as well as figuratively as the Hendricks organization lines up for this staff photo. The boss, C. E. Hendricks himself, is second from the right.



freshening pastel shades of blue. Fluorescent lighting was provided, with spotlighting on featured items changed from day to day. Convenient desks and seating facilities were installed to facilitate salesman-customer discussions. Private compartments were provided for handling detailed credit arrangements.

Despite all this recent accent on merchandising, however, no one realizes more clearly than Mr. Hendricks how completely the success of his entire sales program hinges upon the continuance of the dependable repair service which he has been offering to Memphis refrigeration users ever since he first formed his own company.

Service On-the-Job

The service shop of the Memphis Refrigeration Co. measures only 20 x 20 feet, but it is manned by five capable mechanics and is equipped with a lathe, a drill press, grinding machine, welding outfit, vises, pipe cutters and threaders, tap and die set, gas drums, paint sprays, air compressors, and a complete array of hand tools.

Far larger shop facilities normally would be required for the volume of service work handled by this company, except for the fact that about 80% of all service work is performed on the job. Mr. Hendricks has built up quite a reputation for this on-the-spot repair work. In completely equipped service trucks, his maintenance crew has continually dispensed a prompt and effective brand of service that has resulted in the establishment of a friendly beachhead on which the newly enlarged

CREDIT WHERE IT'S DUE

In presenting our November Success Story, "It Happened in Monterey", we inadvertently overlooked crediting Bert Holyoake, manager of the San Francisco store of the California Refrigerator Co., with supplying the information for this most interesting article. We sincerely regret our oversight, and take this belated means of acknowledging Mr. Holyoake's fine cooperation and thanking him for a job well done.

The Editors.

Refrigerated "Will-Call"

ONE of the worst problems of the working wife—how to shop for fresh vegetables, scarce butter, lard, etc., when most of these have been snapped up by her housewife sisters long before she is through with the day's job—is being solved at Lewis Food Stores, Riverside, Calif., through an ingenious "refrigerated will-call service".

Under this plan, each of the Lewis stores provides a 60 cu. ft. reach-in refrigerator space, in which perishable food products may be stored through the day. Thus the wife who works downtown may hustle into the store early in the morning, grab those commodities which she normally has no chance to buy, and "check" them to be picked up on her return trip in the evening. The idea has proven a godsend to many thousands of young married couples cooking at home.

To make such service possible, a standard reach-in dairy refrigerator was relocated in a center wall of the store, so that one side faces into the grocery department, the other into a side aisle. Six 2x4 foot doors were cut into the back of the refrigerator, wooden shelves applied, and the whole enclosure painted white with a sign lettered "Refrigerated Will-Call Service—See floor hostess or checking stand."

From 35 to 75 women per day, depending upon the items offered, are making use of the plan at present. Both perishable food stuffs and other items are stored in the refrigerator, to save repackaging and extra trouble. All are kept refrigerated to 40 degrees, so that they will be in perfect condition when the owner picks them up.

The hostess on hand for just such services at the Lewis store handles the entire operation.

and enlivened sales staff can now land with telling force.

Two prime factors have been largely responsible for the effectiveness of Mr. Hendricks' service policy. "First and foremost," he points out, "is our 24-hour emergency service. This is not performed in a disgruntled, sleepy, inefficient fashion. We go all out in our effort to handle every 3 a.m. call just as promptly and as cheerfully as if it were a 3 p.m. call."

The other service policy which has been so instrumental in building good will for this Memphis firm is the offering of monthly service contracts on a fixed fee basis to commercial customers such as groceries, restaurants, and night clubs. Mr. Hendricks explains it this way: "This contract service agreement includes regular monthly inspections and adjustments, as well as any repairs that may be necessary. Our fee covers all labor; the customer bears the expense of any new parts required."

"This contract servicing is an ideal arrangement, and we're plugging it for all its worth. Chief benefit is that it enables us to maintain a steady, year-around service volume. It cush-

ions us against the problem of the seasonal slump in service calls during the winter and the corresponding deluge which usually occurs the minute that summer's hot weather starts.

"By the same token, this practice has enabled us to maintain an efficient, full-strength service staff the year around. Thus we have been able to eliminate one of the worst bugaboos of the refrigeration service business—seasonal layoffs."

Service versus Sales

In a way, Mr. Hendricks' competent service crew is the most formidable competitor of his sales department. So efficient and reliable is the maintenance work which they perform that in many cases old pieces of equipment keep operating much longer than they normally would, thus somewhat diminishing the immediate prospect for new equipment sales. Mr. Hendricks isn't fretting over this aspect of his business, however, for he well realizes that this reputation for good service will eventually pay off. And he knows full

Continued on page 64

REFRIGERATION INDUSTRY

News

SEEGER WITHDRAWS FROM DISTRIBUTING COMMERCIAL LINES

Seeger Refrigerator Co., St. Paul, is withdrawing from the distribution of commercial refrigeration equipment. One of the oldest names in the refrigerator cabinet making field, Seeger produces the Cold-spot household refrigerator merchandised by Sears, and also has made some commercial refrigerator lines which were distributed by other firms in the industry.

A Seeger official reported that the company had recently sent a letter to distributors and dealers advising them that its merchandise would not be available to them after the present production.

He said that the company had not been able to supply any of its customers with display cases, and that only a portion of reach-in requirements had been filled, because of a raw materials bottleneck.

The company, rather than have distributors and dealers continue to depend on it for merchandise which it is unable to supply, felt that it should withdraw its line and let these outlets obtain franchisees from commercial outlets who may be in a better position to take care of this business, the Seeger official said.

STERLING SMITH IS NEW "RECORD" AGENT

Sterling F. Smith has been appointed direct factory representative in the eastern and midwestern section of the country for Refrigeration Engineering, Inc. of Los Angeles, in that company's bid for nationwide distribution of its "Recold" refrigeration products.

Mr. Smith, long an executive in the commercial refrigeration field, recently resigned as general sales manager of Baker Ice Machine Co. to form his own sales organization under the name of Sterling Refrigeration Products. He has established headquarters in the Barr Building, Washington, D.C., from which he will direct the sales and distribution of "Recold" products.

THIS MAKES IT OFFICIAL!



"Rema", the penguin at the Cleveland zoo, solemnly accepts the special invitation to the 5th All-Industry Show which is being tendered him by F. J. Hood, chairman of the Show committee. The Show (just as if you didn't know) will be held Jan. 26-29 in the Cleveland Public Auditorium.

PROGRESS MADE ON COMM'L STANDARDS

Representatives of a dozen leading corporations in the refrigeration field have reported progress in the creation of a set of minimum standards for open type condensing units up to and including 5 hp in size.

Indications were that the standards might be completed and approved before the end of 1947, following another meeting of the Industry Joint Engineering Committee at Swampscott, Mass. Bringing together men from both ACRMA and REMA, the Swampscott session was the second in history at which representatives of groups covering the entire refrigeration machine industry were able to meet and work in complete unity for a common purpose. (See photo on page 47.)

At Swampscott the committee members had before them a preliminary draft of the new set of minimum standards. They spent an entire day going over them,

item by item and paragraph by paragraph. In their revised form the standards will be sent to all interested parties for further comment or approval.

A third meeting of the Industry Joint Engineering Committee will then be called, probably before the year's end, to put the standards into final form.

NEMA AUGUST SALES DROP TO 213,901

World sales of household electric refrigerators by 11 manufacturers reporting to the household refrigeration section of National Electrical Manufacturers Association totaled 213,901 units in August, a substantial drop from the 277,70 units reported in July.

Total world sales for the eight months were 1,968,792. More than half the total of sales reported this year were in the 7 cu. ft. size, with the aggregate in this classification being 1,148,645. Sales in the 9 and 10 cu. ft. sizes totaled 359,282 for the eight-month period.

172 FIRMS SIGN FOR EXHIBIT SPACE AT ALL-INDUSTRY SHOW

Addition of seven new companies to the roster of exhibitors at the 5th All-Industry Refrigeration and Air Conditioning Exposition, which will be held Jan. 26-29 in Cleveland's Public Auditorium, boosts the total number of exhibitors to 172, despite a pair of newly announced cancellations. Headquarters of Refrigeration Equipment Manufacturers Association, sponsor of the show, reports that the exposition is a complete sellout.

The seven new exhibitors scheduled are: Wagner Electric Corp.; Liberty Motors & Engineering Corp.; Crown Refrigerator Corp.; Remco, Inc.; Halstead & Mitchell; A. O. Smith Corp.; United Cork Co.

WEBER DELIVERIES UNHALTED BY FIRE

A three-alarm fire which caused approximately \$300,000 damage at the Weber Showcase & Fixture Co., Inc., on Oct. 25 affected only a minor storage warehouse at the millwork division of the company, according to Karl Weber, President. Main plant and offices, two blocks away, where store fixtures and refrigeration equipment are produced, were not involved in the fire. None of the company's production facilities were damaged in this fire, the only major loss in Weber's 50 years in business.

"Many customers, hearing of the fire," said Mr. Weber, "have become concerned about delivery of their orders for equipment. The fire has in no way impaired our ability to produce and ship equipment according to schedule."

NEW N. C. DEALER

Batts Refrigeration Sales Co. has been established in Durham, N. C. as a refrigeration equipment dealership. Authorized capital stock is \$25,000 and incorporators are Edna W. Batts and H. H. Thacker, of Durham, and Beulah B. Dickerson, of Raleigh, N. C.

JAHCO TAKES TO THE FIELD



John S. Mackinlay (center) and Jack Clarke (operating controls), Jack & Heintz service engineers, answer questions about glass evaporators during an RSES meeting in Cleveland which lead off a series of eight such "educational entertainment" programs staged by the company throughout the midwestern and southern states. Scheduled in cooperation with six of Jahco's authorized wholesalers and two trade associations, this series of meetings is aimed simply at carrying the story of the company's condensing units into the field.

COMMERCIAL TERMS TO HOLD TIGHT

A quick check of commercial refrigerator producers indicates that the ending of government-regulated time payment terms is unlikely to result in any loosening of credit. The government regulation never actually covered commercial equipment, and so sales in this field are not expected to be affected by the shift.

Suggested terms during the past two years have been 25% down and 18 months to pay, a tightening of the previous average of 20% down and 24 months, but looser than in some cases during wartime when 30% down and 12 months were being asked by some concerns. Relaxation to the 20% down and 24 months basis would still be sound, industry men believe.

Less commercial equipment than usual is being sold on terms today, it is reported, since a great deal of it is going for replacement and market operators are in excellent financial position, often paying cash for their new equipment. With new outlets, terms are used, however, and can be important as selling points.

NEW REWA MEMBER

Refrigeration & Appliance Parts Co., 162 Court St., Charleston, W. Va., has been elected to membership in Refrigeration Equipment Wholesalers Association. President of the new member firm is J. S. Haight. Other officers are: J. F. Williams, vice president; W. P. Miller, secretary; and V. V. Chaney, treasurer.

PHILCO NET PROFIT CONTINUES TO RISE

Net income from operations of Philco Corp. in the second quarter of 1947 totaled \$1,626,974 after all taxes and charges including an inventory reserve of \$1,200,000, and reserve for future research expenditures, and was equivalent, after preferred dividends, to \$1.12 per share of common stock.

In addition, there was net non-recurring income of \$798,147 after taxes, or 58 cents per common share, so that total earnings for the quarter amounted to \$2,425,121, or \$1.70 per share after preferred dividends.

In the first quarter of 1947, net income totaled \$1,609,754 after taxes and charges including an inventory reserve of \$1,300,000, and was equivalent to \$1.10 per share of common stock after allowing for preferred dividends.

In the second quarter of 1946, when operations were just beginning to recover from reconversion difficulties, net income amounted to \$14,787.

Net income in the first six months of 1947 amounted to \$4,034,874 and was equivalent to \$2.80 per share of Philco common stock, after allowing for preferred dividends, as compared with a net loss of \$54,684 in the first half of 1946.

Sales (including excise taxes) of Philco Corp in the second quarter of 1947 amounted to \$57,754,000.

BANKRUPTCY OK'D FOR COOLING FIRM

Petition of American Thermal Industries, Inc., Detroit manufacturer of packaged air conditioning units, for reorganization and relief under Chapter X of the Bankruptcy Act has been approved, and an order has been filed in the U. S. District Court for eastern Michigan temporarily continuing the debtor in possession of its properties and authorizing the debtor to operate its business pending further order by the court.

On December 1 a hearing will be held before this court to determine whether or not the court shall continue the debtor in possession or appoint a trustee.

FAJANS NAMED NEW REWA SECRETARY

Irving J. Fajans has been appointed secretary of the Refrigeration Equipment Wholesalers Association for the remainder of the present fiscal year, replacing R. L. Hinshaw, who has resigned as secretary and a director of the organization due to the pressure of business conditions.

Members of REWA's Region 9 have nominated N. W. Edwards, general manager of Refrigerating & Power Specialties Co., San Francisco, to fill Mr. Hinshaw's unexpired term as director.

2nd WESTERN SHOW DATES ARE SET

Second annual Western Refrigeration Educational Exhibit and conference sponsored by the California Association of Refrigeration Service Engineers will be held in the Palace Hotel, San Francisco, April 30 through May 2.

David Fagg is general chairman of the conference, assisted by W. E. Wharton, coordinating chairman; Rowland F. Cooke, entertainment and arrangements; M. B. Willis, contracts, and C. L. Rusten, publicity. J. Pat Riley is president of the state RSES group sponsoring the event, which last year attracted over 3,000 persons.

GEMCO NAMES FIVE NEW REGION HEADS

Five new regional sales managers have been appointed by Norman B. Schreiber, new board chairman and general manager of General Engineering & Mfg. Co. These men, each with a staff of assistants, will work with the company's national distributor and dealer organization.

The new regional managers, and their respective territories are: M. W. Nerius, West Coast; Chester H. Fox, north central; C. J. LeMaster, south central; Harry B. Osmundsen, northeast; Charles J. Davis, southeast.

YES, GIRLS—IT'S THE NEW 'WATER BOY'



Flown to Detroit by "Capitaliner", the first Norge "water boy" portable water cooler to be produced in the company's Chattanooga, Tenn. plant is trundled off the airport by model Diane Milne and hostess Mary Jane Ives. Production of this unit at present is still on a pilot line basis.

Air Conditioning Equipment and Components and Accessories for Air Conditioning and Commercial Refrigeration Equipment: Summary of Shipments by Major Class of Product, Second Quarter 1947

Product	Second Quarter 1947—Shipments of Complete Units					
	Total		Domestic†		Export‡	
	No.	Value (dollars)	No.	Value (dollars)	No.	Value (dollars)
Section I—Components and Accessories						
Total		49,722,318		45,853,740		3,868,578
Condensing units.....	319,542	23,697,666	302,451	21,702,375	17,091	1,995,281
Ammonia refrigerants.....	438	533,470	395	488,132	43	45,338
Refrigerants except ammonia.....	319,104	23,164,186	302,056	21,214,243	17,048	1,949,943
Air cooled.....	308,017	18,897,124	292,060	17,362,437	15,957	1,534,687
Open type.....	140,534	12,257,495	126,585	10,867,251	13,949	1,390,244
Hermetic type.....	167,483	6,639,629	165,475	6,495,186	2,008	144,443
Water cooled.....	11,087	4,267,062	9,996	3,851,806	1,091	415,256
Compressors and compressor units.....	181,624	10,124,653	172,181	9,190,434	9,443	934,219
Ammonia refrigerants.....	1,118	2,152,382	935	1,670,631	183	481,751
Refrigerants except ammonia.....	180,506	7,972,271	171,246	7,519,803	9,260	452,468
Centrifugal refrigeration machines.....	71	1,558,179	58	1,378,533	13	179,646
Heat exchanger equipment.....		14,341,830		13,582,398		759,432
Evaporative condensers.....	1,548	1,856,392	1,467	1,777,389	81	79,003
Unit coolers.....	42,815	5,668,164	39,676	5,306,883	3,139	361,281
Air conditioning.....	5,087	1,767,027	4,796	1,701,872	291	65,155
Refrigeration.....	37,728	3,901,137	34,880	3,605,011	2,848	296,126
Other heat exchanger equipment.....		6,817,274		6,498,126		319,148
Section II—Self-Contained Air Conditioning Units and Ice Making Machines						
Self-contained air conditioning units.....	25,240	10,626,892	23,274	9,767,959	1,966	858,933
Room type.....	18,397	4,056,034	16,799	3,486,851	1,598	569,183
Other than room type.....	6,843	6,570,858	6,475	6,281,108	368	289,750
Ice making machines.....	973	517,099	897	489,861	76	27,238

n.a. Not available.

†Continental United States.

‡Includes Canada, Mexico, and United States territories.

§Includes condensers and liquid coolers, shell and tube and shell and coil types, as well as fin coils (heating and cooling) and plate type evaporators.

COMM'L CREDIT SETS NEW FINANCE TERMS

Terms for the financing of new and used cars and home appliances, now that Regulation W has expired, have been announced by Commercial Credit Corp.

Regulation W was the Federal wartime restriction on instalment purchases of a large number of articles frequently bought on the instalment plan. Designed to conserve critical materials and to act as a brake on inflation during the war, its abolition was ordered by the last Congress as of November 1.

Carrying out its announced policy of "encouraging the use of reasonable instalment terms in order to sell merchandise and in opposition to the practice of selling terms instead of merchandise," Howard L. Wynegar, president of Commercial Credit has disclosed that the new terms modify somewhat those set up by the Federal Reserve Board when Regulation W was in effect.

Minimum down payments on new cars remain at one-third of the selling price, with monthly payments spread over a maximum of 24 months, Mr. Wynegar said.

All home appliances except radios carry a minimum of 20% down payment with a maximum of 36 months in which to pay.

MISSOURI GROUP IN ADVERTISING DRIVE

Air conditioning and refrigeration firms in St. Joseph, Mo., who formed an association two years ago, have started an advertising campaign in newspapers to inform the public of their work and aims.

The organization, known as the Refrigeration Association of St. Joseph, is

composed of sales and service organizations, salesmen, wholesalers, and dealers of refrigeration and air conditioning equipment. Present officers are Fred Donovan, president; John Stilgenbauer, vice president; Tom Hodgen, secretary, and Harold Walters, treasurer. Merle Murray is chairman of a three-man board of directors.

COOLING SHIPMENTS TOTAL \$49 MILLION

Shipments of components and accessories for air conditioning and commercial refrigeration equipment were valued at \$49.7 million during the second quarter of 1947, according to Bureau of the Census figures. This brings shipments for the first half of the year to \$95.5 million.

Second quarter shipments were an increase of 9% over the first quarter shipments, which totaled \$45.8 million.

Most classes of components and accessories and complete air conditioning equipment continued to increase. Major increases were as follows:

Condensing units, 7%, from \$22.2 million in the first quarter to \$24.0 million in the second quarter; compressors and compressor units, 22%, from \$8.3 million to \$10.1 million; heat exchanger equipment, 7%, from \$13.4 million to \$14.3 million; and self-contained air conditioning units, 16%, from \$9.2 million to \$10.6 million.

Two items showed decreases: Centrifugal refrigeration machines, 15%, from \$1.8 million to \$1.6 million; and ice making machines, 60%, from \$1.3 million to \$0.5 million. Seventy-three manufacturers of components and accessories and complete air conditioning equipment reported in the survey, and estimates were made for a few more firms that did not submit reports in time.

Second-quarter shipment figures are shown in the adjoining table.

INDUSTRY EXECUTIVES COOPERATE IN FORMING COMMERCIAL CODE



Present at the Swampscott meeting were these 15 top industry executives. Left to right they are: Henry A. Brysselbout, York Corp.; Clyde Plaeger, Servel, Inc.; George R. Kingston, Kelvinator Div.; A. B. Newton, Airtemp Div.; Carl Ehrenhardt, General Electric Co.; J. L. Gibson, Frigidaire Div.; Ted Benson, Frigidaire Div.; W. E. Landmesser, York Corp.; Lars Hanson, Carrier Corp.; Leonard C. Bastian, Air Conditioning & Refrigerating Machinery Association, Inc.; Oscar Buschmann, Copeland Refrigeration Corp.; George Davis, Lynch Mfg. Corp.; Alfred D. Sullivan, Brunner Mfg. Co.; Frank K. Smith, Tecumseh Products Co.; Mark E. Mooney, Carrier Corp. The story of their progress appears on page 45.

NERA PLANNING JANUARY MEETING

National Electrical Retailers Association will conduct a national conference of retailers of appliances and radios in the Sheraton Hotel, Chicago, on Jan. 19-21, 1948, according to C. C. Simpson, managing director.

Subjects scheduled for discussion include manufacturer-distributor relations, service, sales promotion, business efficiency, trade-ins, rural electrification, installations, and expansion of NERA and NERA services.

WILSON LAUNCHES PROMOTION DRIVE

Plans are under way for the most extensive program of advertising and sales promotion in the history of Wilson Refrigeration, Inc., a division of Wilson Cabinet Co., Inc., Smyrna, Delaware, according to an announcement by Charles R. Mougey, sales promotion and advertising manager. The program will be aimed at development of new sales and advertising support for the company's line of farm and home freezers, refrigerators and milk coolers.

At the same time, Mr. Mougey announced the appointment of The Aitkin-Kynett Co. of Philadelphia to direct the company's new advertising program.

COMML. CREDIT NETS \$3 MILLION IN 6 MO.

Commercial Credit Co. has reported consolidated net income of \$3,308,556.02 for the first six months of 1947, compared with \$1,908,688.81 for the same period in 1946. This latter figure, however, included transfer of \$1,100,000 from reserve for contingencies, which was fully stored during the last six months of the year.

These figures do not include any unrealized appreciation of securities, investments, or assets held by the company or any of its subsidiaries, and are after charging off all losses and providing ample reserves for probable losses on doubtful and current items.

NEW QUARTERS

Savell Refrigeration & Equipment Co., Pensacola, Fla. dealer in commercial refrigeration and restaurant equipment, has moved into the new building which it constructed next door to its former location.

JAHCO PAYS NEW 50-CENT DIVIDEND

The board of directors of Jack & Heintz Precision Industries, Inc., has declared a dividend of 50 cents per share on the outstanding shares of the company's Cumulative Preferred Stock, 4% Series, payable October 1, 1947, to holders of such shares of record as of September 23, 1947.

The Board took no action on the payment of dividends in arrears for the first three quarters of 1947. After the payment of the October 1 dividend, arrears will amount to \$1.50 per share, or an aggregate of approximately \$105,000.

PA. CROSLLEY OUTLET BUYS NEW QUARTERS

Purchase of offices, showrooms, and warehouse buildings at 619-621 Walnut St., across from the Pennsylvania state capitol building, has been announced by Jules Alexandre, Inc., Crosley distributor in Harrisburg, Pa.

The buildings, consisting of approximately 30,000 square feet of floor space, were purchased from the Pennsylvania Railroad and were originally built by International Harvester Co. for storage of heavy tractors and farm equipment. Directly adjoining the buildings is a parking lot accommodating 300 automobiles.

In addition to Mr. Alexandre, officers of the distributing firm are Ben Eby, vice president and secretary; Samuel Prescott, vice president and comptroller; and Otto Hepner, treasurer.

COLLEGE TEACHES APPLIANCE SELLING

A 15-week course in "Demonstration Techniques for Electrical Appliances" is being conducted by the Evening Extension Div. of Hunter College, New York, in cooperation with the Electrical Women's Round Table of New York, Inc.

Fee for the course, which is being conducted as part of the college's adult education program, is \$14. The course is designed to train present and prospective demonstrators for electric utilities, department stores, and appliance dealers, and will emphasize techniques rather than brand names. Instructors include experienced home economists from such appliance manufacturing firms as Westinghouse, General Electric, and Frigidaire.

The Electrical Women's Round Table is offering two awards of \$50 each to the two students who write the best papers and receive the highest grades in the course.

FIRE DESTROYS THERMAL BRANCH

Fire destroyed the building occupied by the Great Falls, Mont. branch of Thermal Co., Inc., refrigeration supplies wholesaling firm with headquarters in St. Paul, Minn., on Sunday, Oct. 19.

The loss was completely covered by insurance, according to H. W. Small, Thermal president, and it is expected that the company's Great Falls branch will be operating in a new location in the near future.

MUESSEL LEAVES ACTIVE SEEGER ROLE

Charles A. Muessel, vice president of Seeger Refrigerator Co., for many years in charge of sales in the eastern seaboard states, and for the past thirty years in charge of the New York branch office, has retired from active participation in the management of Seeger.

Due to a change in the sales policy of the company, the New York office has been closed permanently.

Mr. Muessel will retain his interest in Seeger as well as several other interests in which he has been active.

BROWN AGAIN ADDS TO BRANCH STAFFS

New sales and service engineering staff additions and promotions have been announced by the Brown Instrument Div. of Minneapolis-Honeywell Regulator Co.

Edward B. Kohl has been transferred to Corpus Christi. He was previously with the Houston branch office of the company. I. K. Farley has been transferred from the Philadelphia branch office to Houston. John D. Root, formerly instructor at the Brown School of Instrumentation, has been made sales engineer at Philadelphia. E. Curt Richards has been transferred from the company's general sales department to the New York sales engineering staff. Thomas Pitts has been appointed industrial sales engineer at the Charlotte branch office.

In line with the company's expansion of customer service facilities, it had added the following men to its branch office field service engineering staffs:

William E. Brittan, Philadelphia; Edward J. Chance, New York; Ethron B. Deebel, Philadelphia; Gerald R. Dryden, Syracuse; John W. Forbes, Albany; Carl R. Haug, Philadelphia; Willard A. Holm, New York; Roger F. Lederer, Chicago.

Albert J. Leonaitis, Hartford, Conn.; Elgin H. Lochte, Houston; John E. Luttrell, Buffalo; Kenneth Shapleigh, Boston; Clayton K. Taylor, Indianapolis; Robert H. Walker, Cleveland, and Frank M. West, Boston.

ON WITH THE SHOW!



Representatives of three of the cooperating industry associations gather with F. J. Hood, chairman of the REMA Show committee, to review plans for the 5th All-Industry Refrigeration and Air Conditioning Exposition to be held Jan. 26-29 in the Cleveland Public Auditorium. Left to right are: Mr. Hood; Gerald W. Weston, executive vice president, NARC; Alfred Chadburn, ASRE; and James H. Downs, Show committee chairman, REWA.

NEXT YEAR'S VOLUME

IN COMMERCIAL REFRIGERATION EQUIPMENT MAY BE GREATER

THAN EVER BEFORE. TWO THINGS WILL HELP DECIDE WHO

GETS THE LION'S SHARE OF THIS BUSINESS...FIRST,

INTELLIGENT SALESMANSHIP. SECOND, COMPLETE FINANCING

SERVICE. TIME BUYING WILL OUTRANK CASH BUYING BOTH IN

NUMBER AND DOLLAR VOLUME OF TRANSACTIONS. COMMERCIAL

CREDIT FINANCING WILL ENABLE YOU TO STOCK, TO SELL,

AND TO INSTALL WITH ASSURANCE OF YOUR CHANCE TO

EARN YOUR MERCHANDISE PROFIT... INVESTIGATE NOW.

COMMERCIAL CREDIT CORPORATION

A Subsidiary of Commercial Credit Company, Baltimore

MORE THAN 300 OFFICES IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

RED HOT REFRIGERATION...

Continued from page 37

diffusing effect immediately around the crane operator. The diffuser selected discharges the air in an outward and downward movement, thus effectively washing all the hot surfaces of the cab.

The dust removing filters are the wire mesh cleansable type, the air-entering side being a large gauge mesh, with successive layers of mesh decreasing in size in the direction of

the air flow. The air entering the cab actually is filtered twice, first as it enters the unit as make-up air and again as it returns to the unit as recirculated air prior to its entering the cooling coil.

The cooler was designed to require as few controls as possible because of the jarring to which they would be subjected in use. A two pole, push button thermal overload switch permits the continuously-operating ventilating air fan to turn over and start to deliver air into the cab. When this fan starts to operate, a combination

cooling-heating thermostat with a selector switch takes over, permitting automatic operation of the cooler based on the temperature demands in the crane cab. If the ventilating fan does not turn over, the mechanical operations of the entire cooler are automatically cut out. The only other controls are the main disconnect switch, a two-step resistor type compressor motor starter, and an automatic contactor for the electric strip heaters.

The upper platform of the mechanical side supports the 5-hp compressor motor and refrigeration compressor. The condenser coil, condenser air fan, motor air fan, and receiver are on the lower platform. The



*All Right...
where does
the Moisture
go?*

THAWZONE DATA

"It sure worked on that job", says Mr. Service Engineer. "But where does the moisture go when THAWZONE acts on it?"

"We'll try to explain", we say. "But please bear with us if our explanation sounds complicated".

Water has the chemical formula H_2O . Chemically, however, it generally behaves as if it were made up of two parts: an H^+ (positive hydrogen ion) and an OH^- (negative hydroxyl ion). There are various compounds that interact with water to split it up this way. Most of them are unsuited to a refrigeration system.

THAWZONE, however, is a solution of compounds which are suitable. All they do is to "grab" on to the H^+ with one part and the OH^- with another. The resulting new compounds are complex, but oil-soluble and inert. As a matter of fact, to separate these materials and identify them is almost impossible. This is another indication of their inertness and similarity to the oil normally present in refrigerating systems.

THAWZONE

PATENTED
The PIONEER FLUID DEHYDRANT

HIGHSIDE CHEMICALS CO.
195 VERONA AVE., NEWARK 4, N. J.

ALSO MAKERS OF

TRACE
REFRIGERANT
LEAK DETECTOR



"A man's just plumb lazy when he won't make his own ice cubes!"

compressor motor is connected to the condenser air fan with an oil and heat resisting belt, and to the compressor with two similar belts. Since only a total of 4.2 brake horsepower is required for the operation of the compressor and condenser air fan, the 5-hp motor is ample in capacity and eliminates the need for a separate motor for the condensing air fan.

Ventilation Needed

Because the motors in the cooler operate at high ambient temperatures, a positive, forced-air ventilating system was built into the cooler for the compressor motor. A small auxiliary fan was installed on the same shaft as the condenser air fan. It is connected to the cold side of the cooler and also to the sheave side of the 5-hp motor by means of small ducts. This ventilating system furnishes cool, 60-65 F twice-filtered air to the motor, permitting it to operate at the normal temperatures at which it is rated, and also helps to dissipate the heat generated by the motor. This filtered air

supplied to the motor materially decreases motor wear and failures.

The condenser air fan is a centrifugal squirrel cage double-inlet, double-width fan, furnishing 2000 cfm over the condenser coil. The condenser coil, which is an extended surface coil, and the cooling coil are made with aluminum fins bonded to a serpentine copper tube heat exchanger.

Water Dissipated

As air to be conditioned passes through the cooling coil, moisture is condensed which drops into a collecting pan. If allowed to accumulate, this water would splash around and cause rust and corrosion. A copper tube is connected from the drip pan to a pierced tube fastened at the top of the condenser coil. The water drops through the small holes in this tube down the air entering side of the coil and is blown through the coil and out into the plant.

Because Freon 114 has a considerably higher boiling point than Freon 12, the refrigerant normally used in comfort air conditioning, it was chosen for this crane cab unit. Air conditioning equipment is designed generally to operate at about 100-125 psi, but for this use it was necessary to use a refrigerant that would give low operating pressures at high ambient temperatures. At 140 F ambient temperature, the gauge pressure with Freon 114 is approximately 71 psi as compared with 206 psi for Freon 12. Freon 114 thus permits operating pressures considerably below the limits of the equipment.

MEAT MARKET . . .

Continued from page 34

tomers who already are complaining over today's high meat prices.

Mr. Horney had long been interested in locker service, but he was unable to obtain the necessary equipment until last July, when he finally installed a total of 234 lockers arranged in two porcelain-front banks down both side walls of the store. As these lockers open right onto the store's sales aisles, it is unnecessary for patrons to be exposed to the cold when using their lockers.

Instead of locating quick freezing operations somewhere in the rear of

the store, Mr. Horney and the Behrens Company cooperated in designing two 30-cu. ft. sharp freezers which are installed in the exact center of each bank of lockers for quick freezing all locker-stored products "right on the spot". These units operate at from -20 to -30 F and are powered by individual 5-hp compressors.

Popularity of this service was proven by the fact that all lockers were rented from the day the installation was completed, and a long waiting list for locker service already has been built up.

PHILCO SALES AT RECORD HIGH

Sales of Philco Corp. in the first nine months of 1947 totaled \$157,209,000 as compared with \$72,465,000 in the same period a year ago, and set a new high record in the history of the corporation. Net income of Philco in the first nine months of 1947 totaled \$5,632,005 after all taxes and charges, equivalent to \$3.90 per share on 1,372,143 shares of common stock. In the first nine months of 1946 the company had a loss of \$20,477.



FREE GUIDE!

Write for Sprague Bulletin C-356. Tells how to select the right capacitor replacement for any job—in a jiffy.

SAVE TIME-MONEY-EFFORT ON Motor-Start Capacitor Replacements



Why waste time, money and effort trying to get exact duplicate motor-start replacement capacitors? Only eight Sprague UNIVERSAL types enable you to handle almost any standard job quicker, easier, more dependably and often at less cost. A small stock investment saves you a whale of a lot of lost time and motion trying to find the right capacitor. They always fit—they're right electrically—and they're the same types now being used by leading manufacturers. Write for Bulletin C-356 illustrated above.

◀ THESE
FEW TYPES
ARE ALL
YOU'LL
NEED !

SPRAGUE PRODUCTS CO.
North Adams, Mass.

SPRAGUE Universal
MOTOR-START CAPACITORS

CANDY COOLING . . .

Continued from page 31

in the U. S., but also Alaska, the Hawaiian Islands, and foreign countries as well. With candy kept constantly at the correct temperature, regardless of climatic conditions, the company is certain that sales will increase to a volume undreamed of before the war.

The case itself is of the open front type which can be used either for clerk service or self service. Measur-

ing 5 feet long, 29½ inches deep, and 56 inches high overall, the entire unit is completely self-contained and weighs about 600 pounds. It is finished in gleaming white enamel, and is equipped with fluorescent lighting for well-illuminated display.

Top section of the cabinet, which is the display area, is of open front construction, but is partially walled on front and sides by clear glass. This space will hold six dozen 1-pound boxes of candy plus a shelf of specials, such as candy bars, etc.

The air circulating system has been

carefully engineered to provide a steady flow of cool air over and around the candy in this open display area in order to maintain the candy at a constant temperature of approximately, 68F, even with room temperatures up to and exceeding 100 F and despite humidity conditions. The case is so designed that there is a minimum of air spillage despite the open front which permits customer selection of candies.

Top of the cabinet's "hood" is about 12 inches wide, providing ample display space for caramels, hard candies, nougats, lozenges, and similar confections which require no refrigeration.

Cabinets are constructed of steel, even to the shelving, and are provided with Fiberglas insulation. Base of the cabinet is divided into three sections, with the self-contained re-

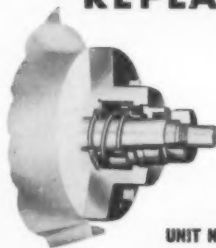
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ROTARY SEAL REPLACEMENT UNITS

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Air Conditioning and Household
Refrigerator Compressors. "Seal
with certainty" with ROTARY SEALS.



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as shown on our stock list*



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"That penguin is good advertising for us, but he sure eats a lot of our frozen fish!"

frigerating unit located in the center, where it can be readily slipped out of the cabinet for cleaning or servicing. On either side of this center section are separate compartments, each with its own service door, for bulk storage of candies.

The refrigerating system itself is comprised of a ½-hp hermetically sealed Kelvinator compressor with air circulating blower, evaporator coils, and dehumidifying system all assembled into one handy package. This system operates on regular 110-volt, single phase, a.c. current, and needs only to be plugged into an existing electrical outlet to place it in operation.

**BUY FROM YOUR
REFRIGERATION WHOLESALE**

RHOY FORMS CALIFORNIA DISTRIBUTING FIRM

Formation of the California Distributing Co. for the purpose of selling



Mr. Rhoey

at wholesale throughout northern California a complete line of commercial and domestic refrigeration equipment and allied products has been announced by T. F. Rhoey, who heads the new firm.

Mr. Rhoey, better known to the trade as Fred, organized the new company following the dissolution of Western Refrigeration Co., in which he had been a partner. Most of the personnel of the former company is continuing to work with Mr. Rhoey in his new venture. Lem Branson will serve as sales manager of the new company, just as he did with Western.

The new distributing firm will maintain offices and showrooms at 2201 East 14 St., Oakland. It will maintain a policy of strictly wholesale merchandising and will carry ample stocks of merchandise. The firm will serve the entire northern California territory, including some 50 counties, and also Reno, Nevada.

Among the companies whose products the new firm will distribute are: Victor Products Corp.; C. L. Percival Co.; Revco, Inc.; Paley Mfg. Co.; Merchant & Evans Co.; Lehigh Foundries; Refrigeration Engineering Co.

REWA'S NEW REGION 11 MEETS, ELECTS OFFICERS

Jack Tupper of Peerless Pacific Co. was elected chairman of Refrigeration Equipment Wholesalers Association's Region No. 11 when that group held its initial meeting and election of officers.

Other officers named to head the new regional group were: Berl Edwards, Refrigerative Supply, Inc., secretary; W. W. Sonnenberg, Refrigerating & Power Specialties, treasurer.

NEW REWA MEMBER

Tempcon, Inc., 336 E. Lake St., Minneapolis, Minn., has been elected to membership in the Refrigeration Equipment Wholesalers Association.

President of the Tempcon organization is J. W. Wheeler. Other officers

are: Eugene A. Coulter, vice president; W. H. Anderson, secretary; and P. B. Schoenholz, treasurer.

JOBBER INCORPORATES

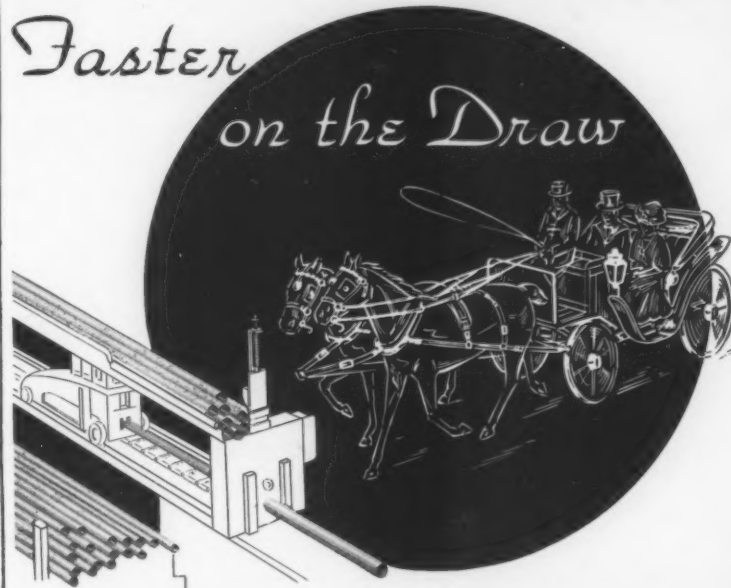
Palmer Supply Co., Tulsa, Okla. wholesaler of refrigeration equipment, has terminated its partnership arrangement and now is operating as a corporation.

R. W. Palmer is president of the new corporation, Joan Palmer Jones is vice president, and Ruth Juanita Palmer is secretary-treasurer.

FLORIDA CITY CONSIDERS CENTRAL COOLING PLAN

A proposal for a master refrigeration plant to provide 45 F water for air conditioning purposes to commercial subscribers in the downtown area is being considered by city officials of Clearwater, Fla.

This plan, advanced by Stanley McIntyre, local air conditioning engineer, calls for construction of the refrigeration plant and the laying of an underground system of insulated piping for delivery of the cooled water to the paying customers.



'SUPERIOR' ENJOYS MORE THAN THE CARRIAGE TRADE.

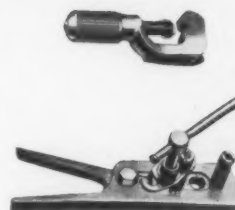
Any manufacturer who wants a quality product, can afford Penn's finer, high grade tubing. Cagey buyers and production managers find that 'Superior' gives their product new pull on the market. 'Superior' is being drawn into more and more new merchandise for it is four ways better - shining bright and clean, absolutely dry, positively easy bending and seamless.

Regardless of the price of your product, you will find economy in using 'Superior' for all your tubing requirements - it assures trouble free installations.

Available in straight lengths or coils, 1" (O. D.) to capillary .093" (O. D.)

Remember, 'Superior' makes the wheels go 'round and profits go up. Write for further information today.

PENN TUBING IS "SUPERIOR"



"Superior" TUBE TOOLS

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New, Different & Better

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REFRIGERANTS
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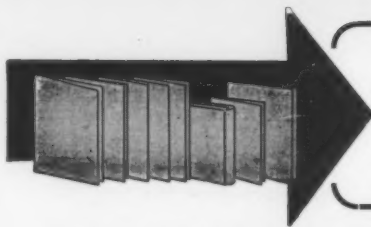


Distributors of
FREON II-12-22-II3

Years of use in all types of refrigeration equipment have proven Eston refrigerants are superior. All are of sustained high quality with exceptionally low moisture content. Servicemen say Eston refrigerants give better performance and more efficient operation. Eston jobbers are conveniently located. Write for complete information.

*In the West it's
Eston for Refrigerants*

Eston
CHEMICALS, Inc.
3100 East 26th Street
Los Angeles 23, Calif.



Useful Literature

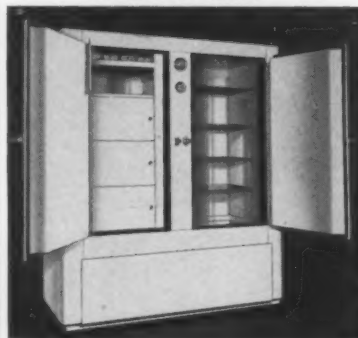
The publications listed below are available to readers without charge. Simply list on the postcard provided in this issue the numbers of the items you wish to receive, and send it to **THE REFRIGERATION INDUSTRY**, 1240 Ontario Street, Cleveland 13, Ohio. Your requests will then be forwarded directly to the companies concerned.

224—Fluxes . . . An engineering bulletin describing 89 different fluxes for specific types of welding, brazing, silver soldering, and various other jobs. Explains how to select the proper flux for 57 different metals, as well as for various makes of cutting tool tips. Available from Krembs & Co.

225—Carbonator . . . A specification sheet illustrating and detailing all features of the Bayers motorless carbonator for soda fountain use. Available from Bayers Mfg. Co.

226—Ice Cream Cabinets . . . A folder which illustrates, describes, and lists specifications of the Schaefer line of ice cream cabinets. Cutaway views are shown to illustrate various construction features. Available from Schaefer, Inc.

A NEW SUB-ZERO COMBINATION FREEZER FOR MODERN, CONVENIENT FOOD STORAGE



Here is the latest addition to Sub-Zero's complete line—Model 30V-2—a large capacity two-temperature freezer. Provides 15 cu. ft. freezer capacity and 15 cu. ft. regular refrigerator storage. White baked enamel exterior—natural finish aluminum interior—special ice-cube freezing section—outside "temperature-teller"—two 1/4 H.P. Compressors. Write for information on availabilities and dealer territories.

SUB-ZERO-FREEZER CO., INC.
MADISON, WISCONSIN, U. S. A.

227—Brewery Refrigeration . . . A new bulletin (No. 708) on refrigeration machinery and equipment for the brewing industry. This 16-page bulletin is entirely devoted to such brewery needs as ammonia compressors, condensers, double pipe or Baudelot coolers, brine tank coils, etc. 32 page installation photos are included. Available from Vilter Mfg. Co.

228—Corrosion Resistance . . . A computer for judging corrosion resistance of non ferrous and stainless steel alloys, designed as an aid to men who buy or specify metals to be used in corrosive environments. This computer, in easy-to-use slide rule form, is available without charge from H. M. Harper Co.

229—Micromotors . . . A series of four folders describing four types (U, W, T, and L) of "Micromotors" manufactured by Redmond Co., Inc. Each folder illustrates the particular type of motor which it describes, shows cutaway or exploded views, and list performance ratings and other specifications.

230—Appliance Slings . . . A 4-page circular illustrating and describing the shipping jackets and slings for major appliances and similar equipment which are manufactured by Webb Mfg. Co. A series of six photographs graphically shows how to properly use these appliance slings. A complete list of styles and prices is included.

231—Two-Temp Thermometer . . . A pocket-size folder describing and picturing the "Duo-temp" indoor-outdoor dial thermometer developed originally by the Jas. P. Marsh Corp. for home and office use, but later found to have a number of commercial and industrial applications where differential temperature readings are desired.

Write Directly . . .

. . . on your letterhead to the W. B. Connor Engineering Corp., 114 East 32 St., New York 16, N.Y., if you wish to obtain a copy of that company's Bulletin K-20, which is a new catalog and engineering data book on its "Kno-Draft" adjustable ceiling air diffusers. This catalog is, in reality, an engineering and application manual, providing in concise form all information necessary for the proper selection and installation of air diffusers.

On the target!

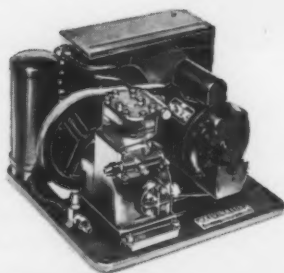


You can't miss on the toughest repair job . . . when you use *dependable* Kelvinator-made parts!

Just stop in at any of the 50 Kelvinator parts depots and select the items you need from a *complete* stock of *genuine* Kelvinator-made refrigeration parts.

Whether you order by phone or mail, or in person, you'll like the friendly, dependable service of your local Kelvinator parts depot. . . Kelvinator, Division of Nash-Kelvinator Corp., Detroit, Michigan.

For condensing units that are precision-built for long-lasting, economical service . . . buy Kelvinator. You can be sure that over 30 years of experience in the building of commercial refrigeration brings you the best. And they're *competitively priced*.

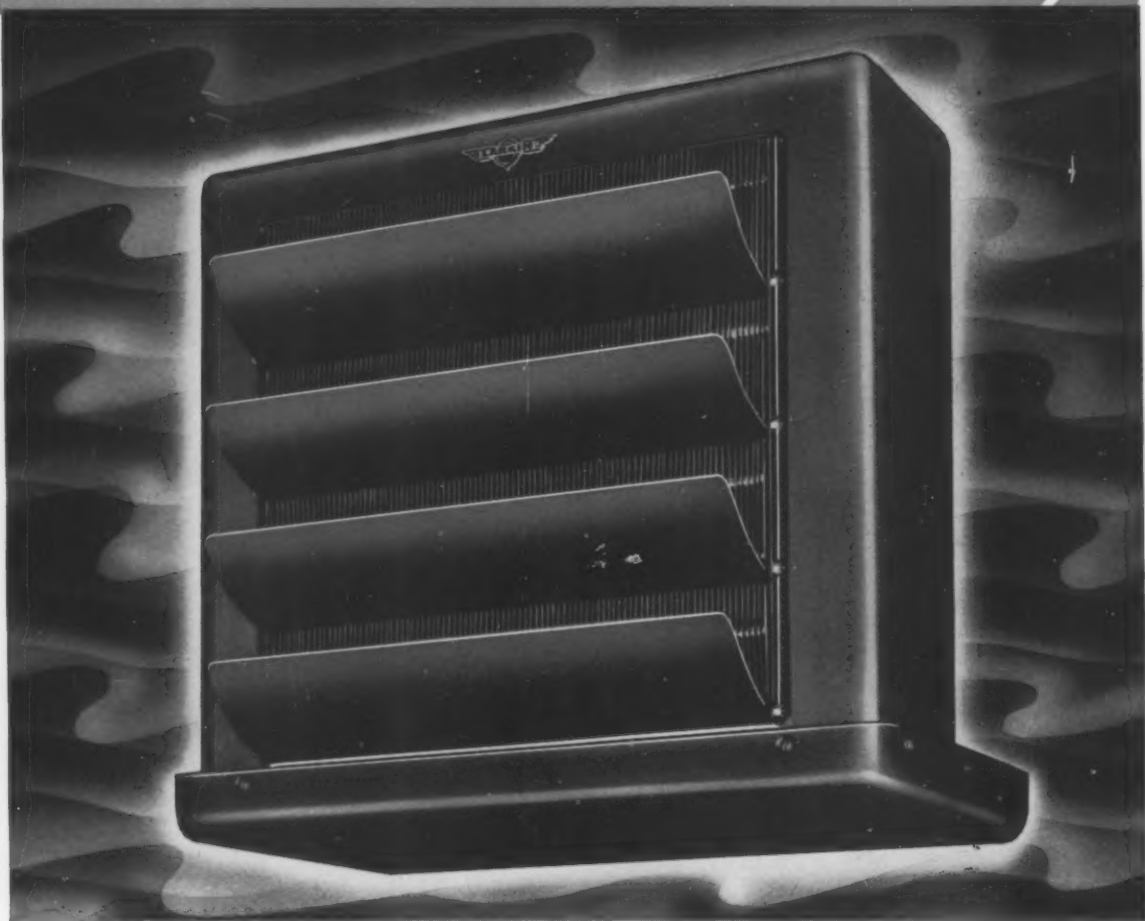


Kelvinator



CONDENSING UNITS OPEN AND SEALED

FASHIONED FOR *Functioning*



LARKIN refrigeration products are modern proof that engineering beauty can add to functional efficiency. Originator of the Cross Fin Coil, Larkin also produces highest quality in Humi-Temp Forced Convection Units... Bare Tube and Zinc Fused Steel Plate Coils... Evaporative Condensers... Air Conditioning Units... Instantaneous Water

Coolers... and other superlative equipment for commercial and industrial refrigeration. Larkin is the leading manufacturer of complete commercial and industrial refrigeration and air conditioning equipment.

Our new catalog No. 1013 is off the press, containing 68 pages of pertinent, factual information on our complete line of equipment. Write for your copy today.

SEE YOUR JOBBER OR WRITE DIRECT TO...

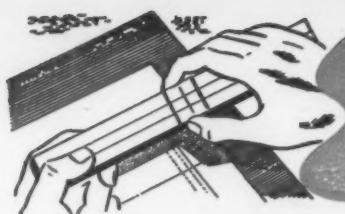


THE WATCHDOG OF THE
NATION'S FOOD SUPPLY

519 MEMORIAL DRIVE · S · E ·

ATLANTA · · · GEORGIA





For further information on any of these products, simply list the key number at the head of each item on the special post card enclosed with this issue.

Cooling Calculator • • P-162

Product: Airserco refrigeration calculator.

Manufacturer: Airserco Mfg. Co., Inc., Pittsburgh.

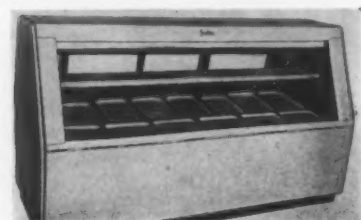


Features: An ingenious plastic pocket instrument which permits rapid selection of 11 different types of refrigeration data, such as low pressure control settings, thermostatic cut-in and cut-out settings, head and back pressure readings, evaporator temperatures, and cooler areas. Mailed postpaid anywhere in the U.S. for \$2.

Display Case • • • • • P-163

Product: 1948 Model P-50 double duty display case.

Manufacturer: Jordon Refrigerator Co., Philadelphia.



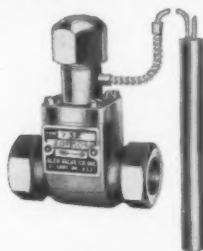
Features: Available in 8 and 10-foot sizes. Clear vision into every part of display section assured by non-glare angle of "Thermpane" display glass. Same type of glass used in

sliding service doors in rear of case. "Moist-Cold" cooling system prevents dehydration. Full length porcelain mezzanine shelf and fluorescent lighting system are standard equipment.

Suction Valve • • • • • P-164

Product: Type 732 snap-action suction valve.

Manufacturer: Alco Valve Co., St. Louis, Mo.



Features: Accurate temperature control provided within one small unit. Responds directly to actual load temperatures. Needs no electrical wiring or accessories. Designed for installation in evaporator suction line, with feeler bulb located in same way as a thermostat bulb. Temperature range is from 20 F to 50 F. Adjustment is by means of stem and dial under seal cap. Dial is marked with 1-degree graduations for close control, with operating differential between "open" and "close" only 2 degrees. Automatic defrosting obtained on "off" cycle where temperature fixing is above freezing. Nominal capacity is 1/2-ton Freon-12 or 3/4-ton methyl chloride.

Home Bar • • • • • P-165

Product: "Consol-ette" refrigerated bar for home or office use.

Manufacturer: Refrigerated Equipment Sales, New York City.

Features: Period styled cabinets, so camouflaged that no one knows the unit is a bar until it is opened. Cabinet can be locked for security, but when opened everything is readily available. Makes own ice cubes, and has

3 1/2 cu. ft. of refrigerated space, plus a concealed compartment with automatic switch-off light for liquor storage. Mirrored service section holds variety of glasses and other equipment. Completely self-contained, no special installation needed. Available for a.c. or d.c. Measures 42 x 42 x 18 inches overall, weighs approximately 200 pounds.

Dairy Case • • • • • P-166

Product: Model DCB-12-1 refrigerated sales cabinet designed for dairy products or bottled beverages.

Manufacturer: Brewer-Titchener Corp., Binghamton, N. Y.

Features: Requires only 76 x 28-inch floor space but has 14 1/2 cu. ft. of storage space. Height 33 3/4 inches; including superstructure, 48 3/4 inches. Powered by 1/4-hp compressor. Storage compartment lined with BTC flooded-plate liner walls. Vapor sealed insulation and 16-gauge bonderized steel cabinet. Recessed toe space and full-length angle mirror provide open display and easy access.

Candy Case • • • • • P-167

Product: Refrigerated candy display case for retail candy sales.

Manufacturer: Victor Products Corp., Hagerstown, Md.



Features: Adequate storage space and glass display counters both cooled by a sealed condensing unit. Doors hung on concealed hinges and fastened by means of self-locking chrome fasteners. Illuminated horizontal glass panel and support are utilized to provide attractive eye-height advertising messages. Chrome is utilized on display trim.

Wire Stripper • • • • • P-168

Product: Pocket-size combination

wire stripper and cutter.

Manufacturer: Aircraft-Marine Products, Inc., Harrisburg, Pa.

Features: Covers range of wire sizes from 22 to 10. Distinctively colored shock-proof handles. Incorporates built-in wire cutter, serrated plier jaws, and handy stud size gauge. Accurate. Retail price is \$2.95.

Bobtail Fountain • • • P-169

Product: New bobtail soda fountain.

Manufacturer: Ace Cabinet

Corp., New York City.

Features: Cabinet type bobtail with 2-sink style available in 5 and 6-foot models, and 3-sink style available in 5, 6 and 7-foot models.

Testing Unit • • • • • P-170

Product: Compact, portable, universal type electrical appliance tester. (Model 60)

Manufacturer: Hanlan Co., Los Angeles, Calif.

Features: Will show true condi-

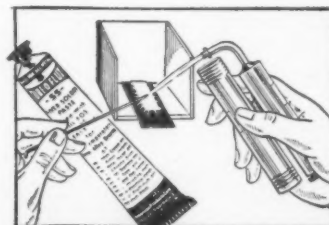
tion of any electrical appliance in common use. May be used for trouble shooting, checking open circuits,



continuity, grounds, short circuits. Will test thermostats under working conditions, or indicate insulation resistance and leakage due to moisture in wiring systems. Carries an a.c. ammeter range of 0 to 15 amps. High sensitivity Neon tube is provided for making resistance tests. Instant working of a flexible switch arrangement provides maximum protection as well as rapid operation. Measures $7\frac{1}{4} \times 6 \times 2$ inches, weighs 3 pounds, lists at \$14.50.

Brazing Kit • • • • • P-171

Product: Packaged kit including all materials necessary for silver soldering or brazing without acetylene torch or tanks.



Manufacturer: American Products Corp., Chicago.

Features: Produces unbreakable, non-corrosive, leak proof joints stronger than the metal itself. Compares favorably with acetylene torch brazing for light bench work on met-

BUY FROM YOUR REFRIGERATION WHOLESALER

New 4-Scale SERVICEMAN the all-purpose thermometer



One more proof that Marsh keeps pace with your needs... a "Serviceman" thermometer with four scales. The illustration tells the story: Outer scale reads down to -30° F. for work on those quick-freeze units—up to $+65^{\circ}$ for the regular run of work. Other scales in differentiating colors show equivalent pressures of Freon, sulphur dioxide, and methyl chloride. So you have here the all-round, all-purpose instrument.

All the features that have made the "Serviceman" so popular have been retained and still more highly developed. This is reflected in the bright chromium bezel which makes an effective contrast with the satin-black finish of the case. Neatly concealed in the case when not in use, is five feet of sturdy tubing, slender enough to pass between the gasket and jamb of a closed refrigerator door. Movement is guaranteed accurate within one degree and has the famous Marsh "Recalibrator" to keep it accurate. Suction cups prevent slipping on irregular surfaces and protect all finishes.

Down to the last detail this is a quality instrument—available at a moderate price that makes it a remarkable value. The serviceman is also available in standard scales and ranges, -30° F. to $+65^{\circ}$ F. and -10° F. to $+100^{\circ}$ F.

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Dept. P. Skokie, Illinois
Export Dept.: 155 E. 44th St., New York 17, N. Y.

MARSH

Refrigeration Instruments

BUY FROM YOUR WHOLESALER

See Our Exhibit

**BOOTH
114**

REFRIGERATION AND
AIR CONDITIONING
EXHIBITION

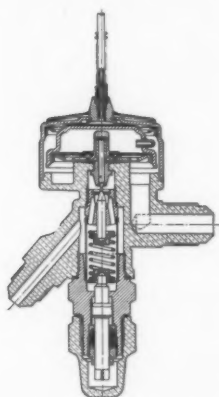
CLEVELAND

JANUARY 26-29

als up to 1/4-inch thickness. Outfit includes an improved type alcohol torch, fuel, heat retaining chamber, accessories, instructions for use, and a handy silver solder supply kit including a tube of flux paste and 100 inches assorted sizes of silver solder wire and 1-inch strip sheet. Complete outfit priced at \$7.50, or soldering kit sold separately for \$2.50.

Expansion Valves • • • P-172

Product: Two thermostatic expansion valves, Models 211 and 212 (shown here), having a new pressure limiting device.



Manufacturer: Automatic Products Co., Milwaukee, Wis.

Features: Accurately control superheat, assure maximum evaporator efficiency, and prevent motor overloads during pulldown or peak load periods. Liquid charged power elements. Pressure limitation accomplished by a sensitive diaphragm unit which has its own liquid charge. Suitable for all temperature applications. Model 211 is a fixed superheat valve, factory adjusted for normal requirements. Model 212 has an adjustable superheat range from 2 F to 20 F.

Air Conditioning Fans • P-173

Product: New line of axial flow pressure fans for air conditioning, dust and fume removal, machinery cooling, and various process applications.

Manufacturer: Sturtevant Div., Westinghouse Electric Corp., Hyde Park, Mass.

Features: Two basic types available—straight-through type or con-

vertible elbow type—both furnished with either 3-bladed aluminum alloy wheel or 8-bladed steel wheel. Designed for either vertical or horizontal operation. High mechanical and static efficiency combined with large volumetric capacity. Sizes vary from 18 to 72 inches; static pressures from 0 to 3 inches; displacement from 2000 to 115,000 cfm.

Pliers-Wrench • • • • P-174

Product: "Pli-wrench" tool usable as a pliers, wrench, clamp, or vise.

Manufacturer: Whale Tool Corp., New York City.

Features: Self-aligning jaw makes



possible a full jaw-length grip on both straight and angular objects and provides powerful hold on work. Simple locking arrangement provides a better than 1-ton grip, even with hand removed, yet the wrench can be re-

BONUS VALUE!

Every

DFN DEHYDRATOR

has a built-in STRAINER-FILTER Assembly

EXCLUSIVE MCINTIRE DESIGN

Protects against moisture, acid, sludge, particles

Each DFN Dehydrator (cartridge type or factory-sealed) is more than a "drier"—it is a scientific assembly which keeps refrigerant lines clear of contaminants that cause freeze-ups, corrosion and clogging.

HIGH CAPACITY DRYING. Each DFN Dehydrator and Cartridge is baked at 300°F. for 3 to 4 hours (according to drying agent used) in controlled temperature ovens to remove all trace of adsorbed moisture—then sealed to preserve full-strength dehydration until used.

This provides greater moisture adsorbency on the line, less frequent servicing.

STRAINER-FILTER ASSEMBLY. Utilizes the exclusive DFN coarse-to-fine filtering principle, through strainer screen, bronze wool filter and wool felt filter, to trap finest particles—prevent packing and clogging—permit free flow of refrigerant, without pressure drop.

Ask your wholesaler about DFN Dehydrators. Write for Catalog R-7.

McIntire Connector Co., 257 Jefferson St., Newark 5, N. J.

Only the

DFN
SYSTEM

DEHYDRATES
FILTERS
NEUTRALIZES

DEHYDRATORS • STRAINERS

FILTERS • NEUTRALIZERS

leased instantly at the touch of a finger. Jaws made of heat treated drop forgings, with machine milled teeth and electro-plated finish.

Pressure Gauge • • • P-175

Product: Absolute pressure gauge of sealed case type with dial indicator.

Manufacturer: United States Gauge Div., Sellersville, Pa.

Features: Designed to indicate on a dial, in units of inches or millimeters of mercury, the absolute pressure

or vacuum to be measured. Graduations are the same as used on barometers. Can be built in a number of ranges to suit individual requirements. Case is of black phenolic material which resists corrosion.

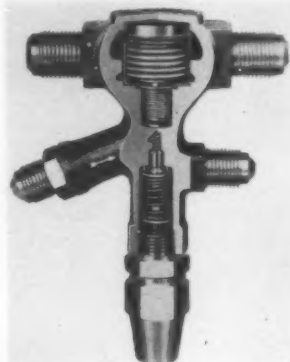
TX Valve • • • • • P-176

Product: Improved thermostatic expansion valve for refrigeration applications.

Manufacturer: Tenney Engineering, Inc., Newark, N. J.

Features: Suction and liquid con-

nections now in same plane, instead of at right angles to each other, facilitating installation, but neither size nor functional characteristics of valve



"We beat the rust and corrosion problem

WITH NIBCO VALVES, WROT COPPER FITTINGS AND COPPER TUBES."

THAT'S what your industrial customers will tell you. You'll make more money and better please customers if you recommend NIBCO Valves and Wrot Copper Fittings with copper tubes for industrial piping on water, air, steam and other process lines. Copper is permanent, free from rust. It ends leaks and maintenance expense. But even more important is the complete freedom from breakdowns, work stoppages and delays. Surprisingly, the installation cost compares very favorably with that of ordinary iron pipe. NIBCO Wrot Fittings are made by patented processes which assure absolute uniformity with close tolerances accurately maintained. Accurate forming means easier alignment, simpler installation and stronger joints. Get all the facts on NIBCO Wrot Fittings. Write today for complete Catalog 614

NORTHERN INDIANA BRASS CO.
ELKART • INDIANA



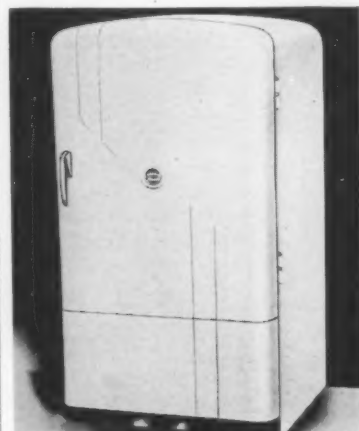
NIBCO
WROT Copper Fittings

VALVES AND
FITTINGS
SINCE 1904

have changed. Can be furnished with check valve incorporated in regular size body. Positive control without a feeler bulb. Close maintenance of superheat control. Compensation for pressure drop in evaporator is designed into valve, eliminating need for external equalizer. Operates in any position. Exact sizing of valve unnecessary, as one valve is suitable for operation with any evaporator having a capacity up to 1½ tons. Particularly recommended for small evaporators or close coupled coil and machine combinations.

Home Freezer • • • • • P-177

Product: Front opening, vertically styled home freezer known as "Hi-



Boy" and designed primarily for urban families.

Manufacturer: Wilson Cabinet Co., Inc., Smyrna, Del.

Features: Occupies less than a

square yard of floor space but stores 220 pounds of frozen foods, based on a figure of 35 pounds per sq. ft. As simple to use as a household refrigerator. Removable front allows freezer to be easily moved through narrow doors. Power shut-off unnecessary during defrosting.

Fire-Resistant Paint • • P-178

Product: "Fire Stop" patented fire-resistant paint.

Manufacturer: Plicote, Inc., Pittsburgh, Pa.

Features: Stops small fires before they spread. Offers superior utility and beauty on wall. Ready mixed and self sealing, it completely covers virtually any surface in one coat. Washable. Available in five pastel tones plus white. Dries to fine textured flat finish.

BY EXTENDING telephone ordering service for three hours after store closing time, from 6 to 9 p.m., the Bon Marche department store in Seattle, Wash., has materially boosted its sales volume in frozen foods.

Since the innovation of this extended service, the store has found that a tremendous amount of additional business has been received from women employed during the day. Many such women do not reach home until well after 6 o'clock, but now the store's new service enables them to make their purchases for the next day via telephone.

Large newspaper ads were run by the store to call the new service to the attention of the buying public. These ads made it clear that the food thus ordered would be delivered the following day. Furthermore they pointed out that the customer need not be home when the delivery is made, as arrangements can be made for the driver to place the frozen food items directly into the customer's freezing compartment.

C. D. CLAWSON NAMED P. E. I. PRESIDENT

C. D. Clawson, president of Ferro Enamel Corp., was named president of the Porcelain Enamel Institute at the P. E. I. sixteenth annual meeting, held recently in Cleveland. He succeeds Richard H. Turk, president of Pemco Corp.

**BUY FROM YOUR
REFRIGERATION WHOLESALE**

HE TAKES HIS SERVICE SHOP WITH HIM



Thomas Rady of Amsterdam, N. Y., is the proud owner and operator of this modern service truck which houses a miniature shop for minor repairs as well as providing ample space for appliance delivery. Mr. Rady is a customer of Central Service Supply Co., Syracuse, N. Y.

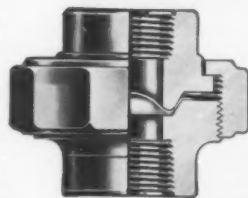


BS&B SAFETY HEADS

provide tailored protection
against over-pressure



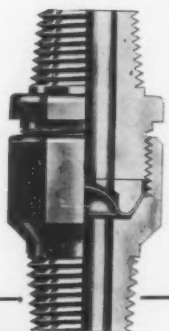
Wherever pressure is employed, you'll find a need for Black, Sivalls & Bryson SAFETY HEADS. A wide variety of sizes and types are available, engineered for each problem, based upon the particular needs of the job. All employ the famous B S & B metal diaphragm that breaks in tension at pre-determined pressure and temperature. No other pressure relief device offers such complete protection with such economy . . . none can approach the relief capacity of a SAFETY HEAD in a given diameter. SAFETY HEADS are built for a specific job . . . pressure relief. No pressure vessel equipped with a SAFETY HEAD has ever burst from over-pressure.



Versatile . . . Simple . . . Sure!

Pressures up to 25,000 psi, liquids or gases . . . SAFETY HEADS handle them in perfect safety. Act instantly. Provide full-pipe size unrestricted relief opening. No working parts. Quickly installed, easily replaced. Tamper-proof. New SAFETY HEAD rupture discs are guaranteed to burst within five percent of specified pressure at stated temperatures!

Write today for latest catalog . . . see how SAFETY HEADS can provide that positive margin of safety in your factory. Address Special Products Division, Black, Sivalls & Bryson, Inc., Power and Light Building, Kansas City 6, Missouri.



FOREIGN INQUIRIES INVITED **BLACK, SIVALLS & BRYSON, INC.**
KANSAS CITY, MO. OKLAHOMA CITY, OKLA.



About People

V. P. Black has been named advertising manager of Airtemp Div., Chrysler Corp. Mr. Black joined the Airtemp organization early in 1935, and after serving in various capacities took charge of the division's advertising in 1939. During the

war his supervisory abilities were needed in other fields, and he served as manager of Airtemp Construction Corp., a wholly owned subsidiary. Now, with war and postwar pressure removed from this operation, Mr. Black has been called upon to head Airtemp's rapidly expanding advertising department.

D. D. (Dan) Wile, formerly with Carrier Corp., has joined the engineering staff of Refrigeration Engineering, Inc., Los Angeles, Calif.

George W. Wilson, who for the past four years has been in charge of jobber sales for Henry Valve Co., has resigned from that position in order to establish his own business as a manufacturers' representative. Mr. Wilson, who plans to handle only products sold through heating and refrigeration jobbers, will travel northern Illinois, eastern Iowa, Wisconsin, and a portion of Indiana.

A. H. Rose has been named sales manager of Schaefer, Inc., Minneapolis manufacturer of ice cream and frozen food cabinets and home and farm freezers. Most recently Mr.

Rose has been manager of sales and advertising of the refrigeration division of Portable Elevator Mfg. Co., Bloomington, Ill. Previously he was with Moore Corp., Joliet, Ill., and City Ice & Fuel Co., Cleveland.

W. E. Dennis has been named general manager of the refrigeration division of Salem Engineering Co. Salem dealers all over the country now will deal directly with him at his headquarters in the company's main office at Salem, Ohio. Mr. Dennis has

been with the organization eight years, prior to his latest appointment was serving as general supervisor of operations.

Fred H. Guterman has been named district representative for General Electric refrigeration in the Philadelphia area. Mr. Guterman, whose office will be at 1405 Locust St., Philadelphia, will specialize in sales to manufacturers. Prior to his present assignment he had acted as sales coordinator for refrigeration divisions.

Norman B. Schreiber, Chicago industrialist, has been named board chairman and general manager of General Engineering & Mfg. Co., St. Louis manufacturer of air conditioning equipment. Mr. Schreiber, who is not related to

John H. Schreiber, Gemco president, is a specialist in corporate management, and currently holds directorates in four other prominent industrial firms.

Heading a number of personnel changes in the air conditioning department of General Electric Co. is the appointment of **L. H. Matthes** as manager of marketing. Mr. Matthes will be responsible directly to G. R. Prout, vice president and general manager



of the department, and will supervise all of the department's advertising and sales promotion, marketing services, and commercial engineering and sales. Prior to his present appointment he was district manager for apparatus products in the Texas area. Six new appointments in the department's refrigeration machine and remote equipment divisions also have been announced. **W. G. Cox**, who has been in the department since 1940, has been appointed assistant to the sales manager; **J. L. Roth**, formerly district representative on cooling equipment for the Chicago area, has been placed in charge of commercial activities at the Fort Wayne, Ind., plant; **W. F. Benoit**, the divisions' eastern manager for sales to manufacturers, has been advanced to sales manager of manufacturer sales; **R. M. Bukaty**, **H. R. Walker**, and **Milton Kalish**, have been appointed product specialists.

H. F. Krantz has been appointed general sales manager of Rigidbilt, Inc., and in this capacity will direct sales of Rigidbilt air conditioning and steam heating coils, unit coolers, and floor type product coolers, as well as of the company's line of custom-built units. Mr. Krantz formerly was north central regional representative for Electric Power Equipment Corp.

W. J. (Bill) Bagley has been named to represent Marlo Coil Co. in St. Louis and surrounding territory. He formerly was midwestern representative

of the company's line of custom-built units. Mr. Krantz formerly was north central regional representative for Electric Power Equipment Corp.

sentative for Superior Valve & Fittings Co., and more recently an instructor at David Rankin Trade School, St. Louis.

Frank R. Kohnstamm has joined the staff of Jack & Heintz Precision Industries, Inc. as general sales manager, and **Harold R. (Doc) Burt** has been engaged by that company as western district sales and service representative of the refrigeration and electric motor divisions. Mr.



Mr. Kohnstamm



Mr. Burt

Kohnstamm, a nationally known sales executive, was for 25 years associated with Westinghouse Electric Corp. in Cleveland and Mansfield, Ohio. Since resigning from Westinghouse in 1942, he has filled various executive positions with Vander Horst Corp. of America and Baldwin Locomotive Works. Mr. Burt, a sales and service engineer of Oakland, Calif., will make his headquarters in that city and will cover 11 western states. He had been with the William Wurzbach Co. since January of this year.

J. Carl Bowen has been appointed West Coast sales and service manager for the heating and air conditioning section of the machinery division of Dravo Corp. Mr. Bowen will be in charge of sales and service for Dravo "Counterflo" heaters and crane cab coolers, with headquarters in San Francisco. His territory includes Washington, Oregon, California, Arizona, Utah, Nevada, Idaho and the western parts of Wyoming and Montana.

C. B. Butler has been elected vice president in charge of production for Sherer-Gillett Co., commercial refrigerator manufacturer of Marshall, Mich. Mr. Butler has been associated with the company since 1913, serving as factory superintendent since 1929.

C. T. Bappler has been named manager for the eastern division of McQuay, Inc., Minneapolis refrigeration and air conditioning equipment manufacturer. Mr. Bappler has been in the refrigeration field since 1924 and has served with Frigidaire, Bush, Krackowizer Co., Tilco-Fin, Inc. and his own firm, Reese & Bappler.

O. J. Tinzman and **R. W. Hayes** have been appointed southern representatives for McQuay, Inc. Mr. Tinzman will cover New Mexico, Louisiana, Mississippi and most of Texas except the Panhandle. Mr. Hayes will cover the Texas Panhandle, Oklahoma and Arkansas, southern Kansas and Missouri and parts of western Tennessee.

Harold H. Reed, formerly assistant manager of the metropolitan New York district for Air Reduction Sales Co., has been appointed manager of that district to succeed W. S. Schoenthaler, who is retiring. **Oren M. Donohue**, formerly assistant sales manager, has been named to succeed Mr. Reed, and **William B. Brower** succeeds Mr. Donohue.

Walton W. Woodroof has been appointed manager of distributor sales in the refrigeration and air conditioning fields for Baker Ice Machine Co., Inc., and **Roger Sprague** has been placed in charge of the company's newly opened St. Louis



Mr. Woodroof



Mr. Sprague

office. Mr. Woodroof, formerly general sales and advertising manager of Universal Lubricating Systems, Inc., will have his headquarters at Baker's new plant in South Windham, Me. Mr. Sprague has long been active in sales engineering and application work for Baker, having joined the company in 1928. In his new capacity he will direct sales, engineering, contracting, and service throughout the St. Louis area.

PLAYSAFE

USE CHICAGO SEALS and VALVE PLATES



Only Chicago valve plates have replaceable seats.



CHICAGO SEAL CO.
30 NORTH WACKER DRIVE • CHICAGO 9, ILL.

ONE
TRUCK
for
ALL
HANDLING
USES!



No. 250-BRR-A

ALL PURPOSE APPLIANCE TRUCK

Furnished and improved since 1931
Fully Rubber Upholstered

Used as 2 or 4 wheel truck

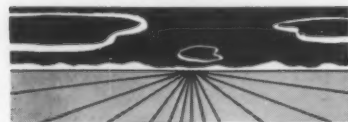
Fully descriptive folder sent on Request.

Price with 8" Rubber Wheels \$30.78



ORANGEVILLE MFG. CO.
Manufacturers Complete line of FLOOR TRUCKS
Orangeville (Cal. Co.) Penna.

GOVERNAIR



PIONEERS in the manufacture of completely packaged AIR-CONDITIONERS*

Manufacturers of: Evaporative Condensers
Air Handling Units for Heating and Cooling
Unit Coolers for Refrigeration • Blast
Coils for Heating and Cooling.

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distributor or wholesaler,
or write direct.

GOVERNAIR CORPORATION

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OKLAHOMA CITY, OKLA.
P. O. BOX 1654

* with evaporative
condensers, U. S. Patent No. 2,297,928.

SHANK VALVES

AVAILABLE NOW!
for

IMMEDIATE SHIPMENT COPPER DEHYDRATORS



2" O. D.—Copper Tubing with $\frac{1}{4}$ " & $\frac{3}{8}$ " Flare Fittings. Ends—Brass Forgings with large hexagon area for Easy Service Mounting. Copper Tube sweat fitted to forging. Brass screens and felt filter.

1" O. D.—Spun End Copper Tube—Brass End Fittings properly proportioned and silver soldered. Brass screens and felt filter.

If Your Jobber Doesn't Stock—Write Us.

CYRUS SHANK COMPANY

631 W. Jackson Blvd. Chicago 6, Ill.

Rebuilding the Coldspot Unit

By A. G. Bate

This series of articles is intended to cover certain specific phases of rebuilding work on Coldspot open-type condensing units. It is an "advanced" series, in that it assumes that the service man has a general knowledge of how to change motors, thermostats, etc., and wants to know how to handle some of the problems which otherwise would necessitate returning the units to the factory.

7. STUCK-UP PUMPS

GENERALLY speaking, a Coldspot pump will jam up as a result of one of two conditions.

1. Because of a low side leak, which generally occurs where the suction line is soldered into the bottom of the pump casting. A pump that is stuck up because of a moisture condition is a real problem. The pump, in this case, must be completely dismantled and all parts subjected to gas, dehydrated.

2. Second cause of a jammed pump is from the cylinder screen finding its way into the blades. Only a very small piece of screen is necessary to lock the rotor, and it will thus be impossible for the pump to operate until it has been dismantled. That part of the screen not found in the cylinder usually will be found by removing the low side valve, and searching the channel in the casting with a flashlight.

SUCCESS STORY . . .

Continued from page 44

well that when these service customers do buy new equipment they'll buy it from him.

So sure is he of the results of this policy that he personally sparkplugs this goodwill program among his firm's service customers. Personally signed "thank you" notes are dispatched to all new service accounts, welcoming them into the firm's ever growing family of "contented customers" and expressing the sincere hope that the new relationship will prove to be an enduring one.

"Service That Serves"

"Service that Serves" is a tag-line that is frequently used in the company's advertising, and Mr. Hendricks personally pledges to all new customers that he will always see to it that the company lives up to its motto.

Carrying this policy still further, Mr. Hendricks makes it a point to express his personal interest in the problems of any of the company's new commercial customers. He personally visits or telephones each one, freely offering to discuss any of their

refrigeration problems and offering the benefit of his wide experience in the field. He never fails to end these conversations by urging that the customer call him personally if any equipment fails to respond satisfactorily to service work performed by his men.

A Good Will Builder

Service on new equipment still in the warranty period is performed with the same careful attention given to any other equipment, for Mr. Hendricks has impressed upon his men the fact that while this warranty work is done without charge it still can be used as another effective means of spreading good will and building future business for the firm.

Consistent newspaper advertising and direct mail promotion, all featuring the company's key policies of efficient service and guaranteed equipment, also has contributed importantly to the firm's progress.

With a business so soundly built and so acutely attuned to trends of the times, Mr. Hendricks and his company seem slated for a busy and a prosperous future.

**BUY FROM YOUR
REFRIGERATION WHOLESALER**

THE REFRIGERATION INDUSTRY

USAIRCO ANNOUNCES GAS-FIRED UNIT HEATER

A new gas-fired unit heater said to have an exceptionally high heat efficiency has been developed by United States Air Conditioning Corp. and is currently being produced by Great National Air Conditioning Corp. of Dallas, holder of the exclusive manufacturing license for the new heater.

Designed for commercial and industrial application in new or old structures, the heater is designated as the Model CS-95 gas-fired unit heater. It is described as having "compact design, economical operation and long life."

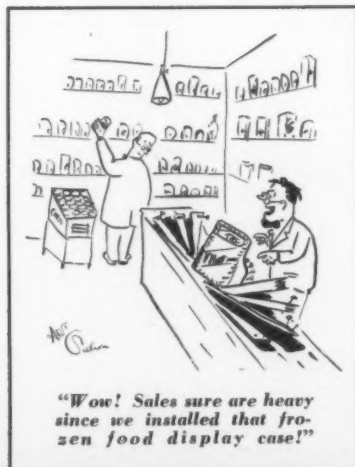
COAST CONTRACTOR OPENS NEW DISPLAY STORE

S & W Refrigeration Co. of Berkeley, Calif., is opening a store at 984 MacArthur Blvd. West, Oakland, Calif. This store will be used chiefly for display of commercial refrigeration and air conditioning equipment.

Merle West has been named product manager and Ronald R. Dysart has been appointed engineer for the new branch.

BUILDS FLA. DEALERSHIP

Ground has been broken at Bradenton, Fla., for the erection of a \$20,000 building to serve as the new home of Theriot's Refrigerator Sales & Service. Located on Manatee Ave., between 10th and 11th Sts., the new building will be of concrete block and cement construction, with 50 foot frontage and running 100 feet deep. It is being built in such a way that a second story can be added later if desired.



LOS ANGELES ASRE HEARS KENNEDY ON COMPRESSORS

"High Speed Centrifugal Compressors" was the topic of the talk delivered by Maron Kennedy of York Corp. before the October meeting of the Los Angeles section of the American Society of Refrigerating Engineers. The meeting was held at the Rodger Young Auditorium.

ALBERT TALKS ON TRUCK COOLING TO FRISCO ASRE

Douglas Albert, chief engineer of Fruehauf Trailer Co. of California, delivered a paper on "Truck-Trailer Refrigeration" before the September meeting of the San Francisco section of the American Society of Refrigerating Engineers.

Mr. Albert described the four principal methods of refrigerating truck-trailers—wet ice, dry ice, hold-over plates, and mechanical refrigeration—and outlined the advantages and drawbacks of each. He also stressed the need for adequate insulation and sharply criticized conflicting governmental regulations affecting motor transport.

A NEW freight-anchoring technique, conserving both time and critical lumber, has been developed for Frigidaire division of General Motors by Fred Parlett, Dayton shipping department checker and winner of a thousand-dollar U. S. Savings Bond for his idea.

Bulky crated products, such as ice cream cabinets and water coolers, are now being clinched together and anchored in railroad freight cars by one and a quarter-inch steel straps instead of the usual shoring of two-by-four planks. Only two special tools are necessary, a strap-iron stretcher and clincher. The straps are anchored to the car sides before they are stretched into position. The operation can be completed in 45 minutes instead of the customary two hours. About eighty-one linear feet of lumber can be saved on each carload lot.

Freight-handlers at the other end of the line have only to snip the steel bands with cutters and the crates are ready to be moved out.

AIR CONDITIONING BILL CONSIDERED IN CAROLINA

A subcommittee of the South Carolina state house of representatives is holding a series of hearings on a pending bill to require textile concerns to air condition their plants.

There's a
BEN-HUR
FARM & HOME FREEZER
to fit Every
family's need

"SIX" "NINE" "TWELVE AND A HALF" "EIGHTEEN"

Each is an engineering triumph in cabinet beauty, dependable food protection, operating economy, trouble-free performance, and "lifetime" satisfaction.

Write for technical details and sales advantages.

HEALTHFUL LIVING THROUGH FROZEN FOODS

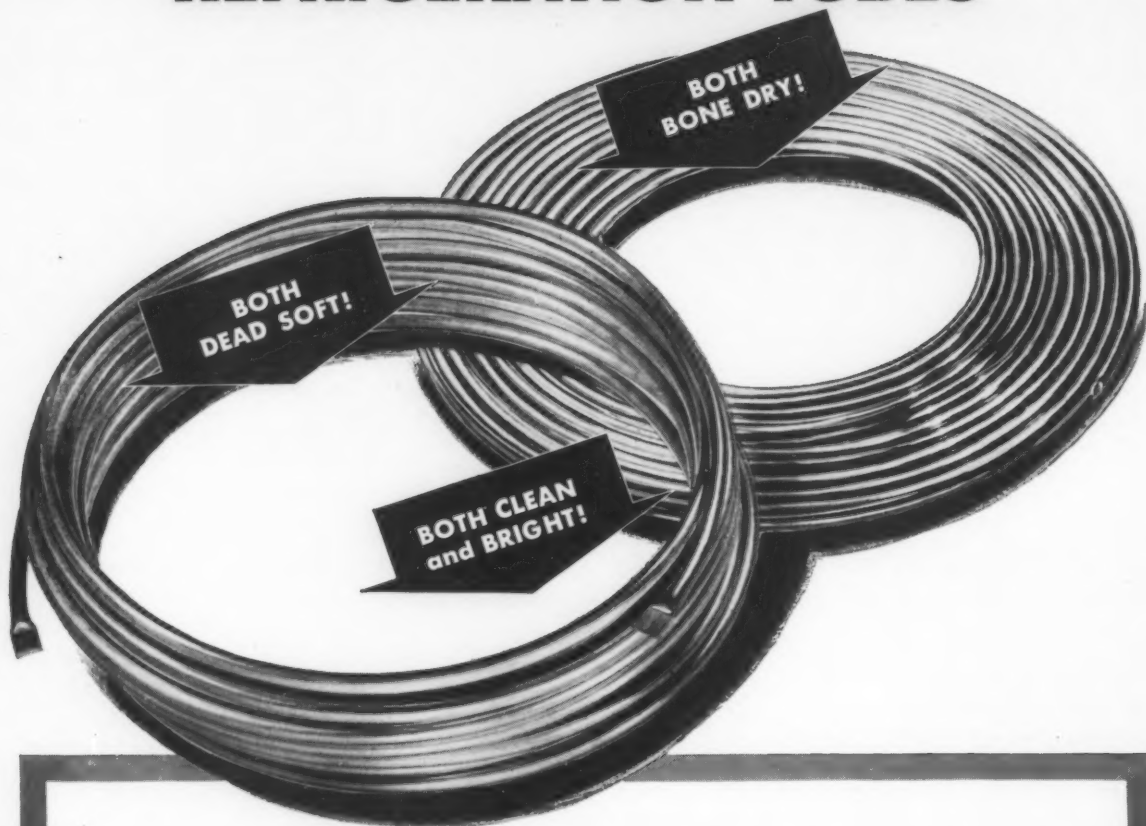
BEN-HUR FARM & HOME FREEZERS

BEN-HUR MFG. CO., DEPT. R,

634 EAST KEEFE AVE.

MILWAUKEE 12, WISCONSIN

REVERE COPPER AND ALUMINUM REFRIGERATION TUBES



REVERE now offers you two types of refrigeration tubes: Revere Dryseal Copper Refrigeration Tube and Revere 3S-O Aluminum Refrigeration Tube. Whenever you use either type, you can depend on the name Revere to mean fine quality.

Both types are bone dry. Because each length is carefully dehydrated and tightly sealed, you needn't worry about "stuck" expansion valves due to tube moisture. Both are dead soft, so that you can bend them easily; and they won't split at the ends when flared. Both are clean and bright.

Revere Dryseal Copper Refrigeration Tube and Revere Aluminum Refrigeration Tube come in sizes from $\frac{1}{8}$ " to $\frac{3}{4}$ " O.D., with .035" wall, and are standard in 50-foot coils. You can get prompt delivery from leading distributors throughout the country.

TO MANUFACTURERS

There is a Revere Distributor near you who is prepared to give you cooperative service on your needs for Revere sheet, strip, rod, bar, tube and shapes in copper, brass and bronze; and aluminum tube.

. . .

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Ave., New York 17, New York

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.;
New Bedford, Mass.; Rome, N. Y. — Sales Offices in
Principal Cities, Distributors Everywhere.

**GRUNOW
AUTHORIZED
DEALERS
ARE MAKING
MONEY!**

Build up your new
box sales now with
Grunow Service
Business!

Write for Grunow
Authorized Service
in your territory.

**GRUNOW
AUTHORIZED SERVICE, INC.**
4313 W. Fullerton Ave., Chicago 39, Ill.

**better
cushioning**

Jarrow...

Refrigerator Door Gaskets Are Again
Made From Crude Rubber

**Always Demand These
Quality Gaskets**

JARROW PRODUCTS
420 N. LA SALLE ST., CHICAGO 10, ILLINOIS

THE PRACTICAL Refrigeration Engineering MANUAL ... by Harold Smith

XX. Hospitals and Institutions

PART III

Many institutions are "miniature cities" in themselves, and the requirements for refrigeration equipment are very broad. Drinking water facilities are frequently located in several stations throughout the building, particularly when the institution houses old or sick people, so that drinking water will be conveniently accessible to both inmates and attendants.

Either individual refrigerated water coolers or a large circulating system will be found in use. Where new drinking water equipment is under consideration, it is usually advisable to recommend individual refrigerated water coolers, conveniently located throughout the building, rather than the circulating system as was previously outlined for hospital use.

During these times, when money is available for expansion

and added equipment, many institutions are looking for improvements or additions to their present refrigeration equipment.

Many institutions have old equipment, used for many years, which is beginning to run high in maintenance cost or is inadequate for present requirements and expansion. This field offers great opportunities for the sale of new replacement or additional refrigeration equipment.

Don't overlook the opportunity to sell institutions frozen food storage and service equipment. A big field of opportunity is open for this type of refrigeration, particularly with institutions operating farm or large vegetable gardens. Other refrigeration equipment, such as mortuary boxes and air conditioning, are also used in many institutions.

Explore this field; it embraces many opportunities for new or replacement business.

XXI. Night Clubs and Cafes

PART I

NIGHT clubs and cafes are large users of refrigeration equipment, both for the cooling of beverages and for the storage and serving of foods. Nearly all high class night clubs also use air conditioning during the year.

Here is a business operated under varied and changing conditions. Patronage is uncertain day-by-day. Frequently unexpected bad weather results in a

very small patronage on a day or night when a much larger business had been expected.

Because of the uncertainty of business due to conditions such as weather, the night clubs were early users of frozen food facilities in which chickens, meats and other products could be frozen and carried over until consumed.

Saturdays and Sundays are usually the big nights for clubs

ODOR PROBLEM SOLVED IN FUR STORAGE VAULTS

Activated carbon air purification has been found to be a valuable odor eliminator in the refrigerated fur storage vaults of Bergdorf-Goodman, smart New York women's specialty store.

Before the installation of activated carbon the furs would, upon unpacking, frequently fairly reek of a strange and foreign "cold storage"

odor. Finally it was determined that the furs themselves were responsible.

Purification of the vault air by activated carbon provided the solution. The Bergdorf vaults, with 44,530 cubic feet of space, have a capacity of 6,770 garments. With a refrigeration cycle of eight minutes, 180 carbon-filled canisters in the ducts were found to be adequate to maintain complete air purity within the storage space. At the rate the carbon is absorbing odors, reactivation will be necessary only once every three years.

and cafes, and large quantities of food must be on hand to take care of the heavy patronage expected on these nights. If bad weather develops, patronage may be off from 20% to 50%, and provisions must be available to safely carry over the surplus food as a result of the reduction in anticipated business.

GOOD LOW-TEMP FIELD

The frozen food storage cooler or cabinet is the ideal equipment to serve this purpose. Every night club serving meals should have this type of refrigeration equipment.

During hot, sultry summer days and nights, air conditioning assures the night club operator of a larger volume of business than would be expected without such equipment. Cool, dry surroundings enable guests to relax or dance without suffering from fatigue, excessive heat or unpleasant perspiration.

Night clubs, well air conditioned, draw business away from their competitors who cannot offer similar facilities.

ABOUT AIR CONDITIONING

Providing satisfactory and adequate airconditioning in a night club is an engineering feat requiring very careful analysis and complete information regarding maximum and minimum requirements.

The system, as in theatre installations, must be controlled to provide maximum comfort under light or heavy patronage. However, since there usually is dancing at night clubs, the human heat load is greater as the patrons in exercising throw off considerable more heat.

Another important requirement is the frequent changing of air. Most people attending night clubs smoke, and this fact makes frequent air changes essential

for a really satisfactory installation.

As night clubs, like theatres, get their large patronage at night, the heat leak problem is considerably reduced, which helps to offset some of the other requirements which are increased in this type of air conditioning installation.

Careful study and analysis is required, but by securing complete information, the refrigeration engineer can lay out a very satisfactory air conditioning installation. This is a big and rapidly expanding field, well worth the attention of all progressive refrigeration companies.

OTHER REQUIREMENTS

In addition to equipment for frozen food and air conditioning, night clubs usually have facilities for food storage and food service, ice cream storage, refrigeration of beverages, draft beer, and the cooling of drinking water and liquors. Many also use large quantities of ice, used in serving drinks.

A battery of ice makers or block ice equipment is frequently installed to handle this need. We will not go into further detail on these items of equipment, as we have previously explained such equipment in detail in previous chapters of the Manual.

AN EXPANDING MARKET

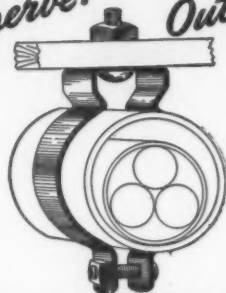
In this field the market is large and businesses are expanding, requiring additional equipment. Many opportunities also exist for replacement of old equipment.

Business in night clubs continues to be good, and therefore the purchase of equipment is going on every day. Don't overlook the good night clubs in your locality as a fine source of much good refrigeration business.

MINERALLAC

Steel HANGERS, CLIPS, STRAPS

Outserve! Outlast!



Minerallac Cable, Conduit and Messenger Hangers are STEEL. Easier, quicker to install; permit speedy, compact wiring; economical. Also in Everdur... Porcelain Insulating Bushings available.

Jiffy STEEL Clips (Pipe-clamp) require only one screw, nail or bolt; rib-strengthened; for hanging pipe, conduit, EX cable, mounting coils, etc. Millions in use.

Steel Straps for Messenger-cable services on outlet boxes; may be used in conjunction with hangers.

Order from your Electrical Wholesaler. Send for literature.

MINERALLAC ELECTRIC COMPANY
25 North Peoria Street Chicago 7, Illinois



Package Units
Heavy Duty Air and Water
Cooled Units

Lehigh Mfg. Co.
Plant: Lancaster, Pa.

Export Department, 160 Broadway
New York, N. Y.



Build More Profitable Business

MAKE compressor oils one of your most profitable items. *Texaco Capella Oils* can help you do this, because *Capella Oils* assure the trouble-free, economical compressor operation that builds customer satisfaction and confidence.

There is a complete line of *Texaco Capella Oils*—the right viscosity for every job. All *Capella Oils* are highly stable . . . moisture-free . . . non-reactive with refrigerants . . . gum and

sludge resistant . . . very low in pour test. Re-sealable caps on handy 1-qt., 1-gal. and 5-gal. cans enable service men to keep unused oil in proper condition.

Texaco Capella Oils are used, recommended, approved by leading manufacturers of air conditioning and refrigerating equipment. Build business with proved-in-service *Capella Oils*. The Texas Company, 135 East 42nd Street, New York 17, New York.



TEXACO Capella Oils
FOR ALL AIR CONDITIONING AND REFRIGERATING EQUIPMENT



TUNE IN . . . TEXACO STAR THEATRE presents the TONY MARTIN SHOW every Sunday night. • METROPOLITAN OPERA broadcasts every Saturday afternoon.



Over the COUNTER

Income Tax Saving Facts

(Continued from November issue.)

WHILE individual income tax returns provide for a separation of business expenses and personal deductions, the latter may have as profound an effect in determining the tax finally computed as the former. Both business expenses and personal deductions determine your net take-home compensation from your business.

So the question of whether to use the short form, which allows a standard credit for personal deductions, or to use the long form and report the deductions, should not be dismissed without careful thought. The wrong decision costs millions of taxpayers additional taxes every year. If you're in doubt, figure your return both ways and compare the results. Then use the form that will save you the most.

Even if it appears that there will be no difference in income tax by use of either form, you may still save considerable cash by using the long form, provided you anticipate the situation before year-end. Circumstances frequently arise in which, by paying certain bills which are of a tax-deductible character before December 31, important tax savings can be effected. You have to be alert, but it really pays off.

This is equally true if your income is over \$5,000 and you therefore have to use the long form in computing your tax. In that case you have a choice of reporting personal deductions, or of taking the standard deduction instead of reporting deductions.

For example, suppose you owe a medical bill of \$500 which you plan to honor in 1948. You have already paid medical bills during the year to the amount of 5% of your income (the first 5% not being deductible)

so that if you pay the \$500 bill it will be fully deductible. Further checking shows that, if the bill is not paid in 1947, your tax will be approximately the same regardless of whether you use the long or short form.

On the other hand, by paying this bill before the end of 1947, your personal deductions will exceed by \$500 the standard 10% allowed in the short form. Even if you're in the lowest tax bracket, paying this bill before year-end will save \$95 in income tax. The same rule applies to other personal deduction items which you may elect to pay by year-end, instead of deferring.

Where payment of such items may not result in any savings, you may elect to defer payment and use the short form with its standard allowances for personal deductions. If you anticipate heavy personal deductions in the following year, you may save considerable tax money by postponing payment until that time.

So, while only two days may separate possible payment dates (December 31 or January 2 of the following year), determining which year to honor such bills may either save or

cost you in tax payments. The decision is up to you.

Many tax deductions of a personal character often are overlooked—things like losses from accident, storm, hurricane, flood, fire, etc. to personal property—because they're forgotten by the time the income tax return is prepared. Here again it will pay you to take time out from your usual business duties and review the year's personal events, to recall forgotten facts of a tax-saving type.

Was the wife's fur coat stolen last February? Did a storm rip off the garage roof? Did a flood ruin personal property stored in the cellar?

Such deductions, of course, may be taken only to the extent not covered by insurance. Losses of this sort also are frequently ignored in computing business schedules in the tax return, due to oversight.

Here are other items that frequently are overlooked:

Membership fees in business associations, including Chamber of Commerce.

Expenses, including travel, hotel and meals, attending trade conventions.

Subscriptions to business and trade magazines.

Cost of smocks, jackets or overalls (but not regular clothes used for work), if not adapted to ordinary wear; also laundering of such clothing.

There are no hard and fast rules that apply to all taxpayers in all circumstances. Faced with certain alternatives and choices, what you as an individual should do is something you'll have to decide for yourself.

What you can do, however, is to become income tax conscious as a year-around practice. Then you can make your decisions with tax-saving considerations in mind, and without violating the tax code save yourself money not only this year, but every year hereafter.

HUSSEY DETROIT AGENT

Crawford-Mazer, Inc., Detroit, has been named sales agent for all Hussey copper and brass products in the Detroit territory. Sales offices of Crawford-Mazer, Inc. are located in the Fox Building, Detroit.

**BUY FROM YOUR
REFRIGERATION WHOLESALER**

THE REFRIGERATION INDUSTRY



BROTHERS TEAM UP IN AIRTEMP OFFICE

The Henn brothers, Carden S. and Bernhart W., have teamed up to make it two of a kind in the Cleveland district office of Chrysler Corp.'s Airtemp Division. Carden Henn is the new Airtemp district engineer in Cleveland, while brother Bernhart has has taken over as district representative.

FLA. YORK DISTRIBUTOR BUILDS NEW HOME

Exhibition rooms, executive offices, and additional storage space will be provided by a \$20,000 addition to the building of the Florida Hill York Corp., Miami. The building will be engineered for air conditioning. It will be ready for occupancy in August, according to R. Ernest Nitzche, president of the refrigeration equipment distributorship.

WYLIE COE HEADS ARNOLD SALES STAFF

Wylie M. Coe has been named sales manager and Arthur G. Kemp has been added to the sales staff of Arnold Wholesale Corp., Cleveland. Robert C. Hager, president, has announced. Sales direction formerly had been handled by vice president E. C. Forster along with his other activities.

A NEW type of refrigerating machine for cooling railway refrigerator cars, developed by George J. and Guy D. Bender, of Belle Glade, Fla., recently underwent tests to determine its practical utility in pre-cooling a car of snap beans.

The device fits into the car door and works on the principle of drawing out the warm air and replacing it with cold air so rapidly that produce in the car is prevented from "sweating and nesting".

Capacity of the device is 10 tons per hour and the temperature of a car can be reduced from 90 to 45 F in 2½ hours, according to the inventors. One machine, it is estimated, will be able to pre-cool four cars per day. The price is said to be moderate. If successful, the new machine is seen as a great boon to produce growers and shippers in providing proper storage temperatures without danger of loss from mold formation.

DELUXE COOLING FOR DELUXE MARKET



George Donlou (left), owner of Donlou's Super Market in Redondo Beach, Calif., poses with his brother John for an opening-day picture in their new modern market. The market is equipped with two Tyler self-service meat and dairy cases and a 60 x 100 foot frozen food case, with two Tyler 12-foot meat cases and a storage box in the meat department, managed by Kolburn Olsen. The equipment was installed by Perfecold Refrigeration Co. of Long Beach, Calif.

NEW CARRIER OUTLET

Chas. S. Martin Distributing Co., Atlanta, has been appointed Georgia distributor for the Carrier line of packaged air conditioning units and

food freezers. The firm recently held a product showing for dealers in the Dixie Ballroom of the Henry Grady hotel which was attended by factory officials.

Now in
Production . . .



Available in:
Double Row—4, 6, 8, 12.
Single Line—2, 3, 4, 6.
Self-contained and remote types.

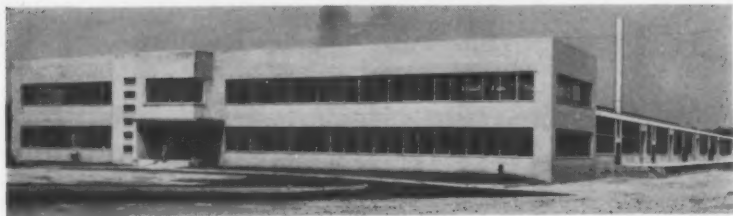
ACE CABINET CORP.

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Manufacturers of: Ice Cream Dispensing Cabinets—Upright Ice Cream Storage Cabinets—Home and Farm Freezers—Frozen Foods Display Cabinets—Creamer Soda Fountains—Bobtails and Sandwich Units.

NEW HOME OF "ASHCROFT" GAUGES



A long term lease on this new factory building in Stratford, Conn., has just been signed by Manning, Maxwell & Moore, Inc., which will use the new plant for production of its line of "Ashcroft" gauges. Removal of Ashcroft production from the company's Bridgeport, Conn. plant where it is now located will permit expansion of the firms Consolidated Safety Valve and American Industrial Instrument lines there.

WHEN YOU RECHARGE



with Virginia SO₂

If you value your time, you should value Virginia "Extra Dry Esotoo," the sulfur dioxide that is consistently pure. When you recharge with "Esotoo," you take the first step in eliminating costly and time-consuming call-backs. Every cylinder is triple-tested to make certain that no dirty, oily or wet product will be shipped—reasons enough why "Esotoo" maintains its international reputation for high quality and dependability. VIRGINIA SMELTING COMPANY, West Norfolk, Va. Established 1898.

Distributors for
Kinetic's "Freon" Refrigerants

VIRGINIA
Refrigerants

WEST NORFOLK • NEW YORK • BOSTON • DETROIT

"EXTRA DRY ESOTOO"

Buy from Your
Wholesaler



ED BROWN REJOINS PERFECOLD STAFF

One of southern California's top refrigeration salesmen, Ed Brown of Los Angeles, has rejoined Perfecold Refrigeration Co. of Los Angeles as sales representative for the central and eastside areas of the city.

Brown, top Perfecold salesman in 1946, was formerly associated with the Golden West Brewing Co. as special contact man in southern California.

While at Perfecold Refrigeration Co., he established so many new sales records that he was awarded a special diamond "star salesman" pin by the company.

SOMETHING new is being added to home freezer and frozen food promotional tools—it's *The Frozen Food Cookbook*, compiled by the research kitchen staff of Frozen Food Foundation, Inc. and expected to be available in the spring of 1948.

The cookbook is designed to give consumers a real incentive to expand their use of frozen foods and zero cabinets. It has over 25 major sections of feature material, about 400 individual frozen food recipes, more than 800 menus for daily meals and special occasions, the detail directions for storing, defrosting, preparing and serving all types of frozen foods.

Business details leading to publication and distribution of the cookbook are being handled by Frozen Food Products, Inc. of New York City, a Foundation member.

NEW PANELYTE OFFICE

Panelyte division of the St. Regis Paper Co. has opened a new district sales office in Minneapolis. The new office will be headed by Herbert M. Giefer, district manager, and will serve Panelyte customers in Minneapolis, St. Paul, and the surrounding area.

Jann P. Nielsen has been named Panelyte representative in the Detroit district.

HONEYWELL FORMS MEXICAN SUBSIDIARY

Minneapolis-Honeywell Regulator Co. has formed a subsidiary organization in Mexico, its sixth foreign subsidiary. The new firm has been named Honeywell-Brown, S. A., and headquarters are in Mexico City.

**BUY FROM YOUR
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THE REFRIGERATION INDUSTRY

CONTRACTORS

News • Activities • Plans

While *The Refrigeration Industry* is not the official publication of the National Association of Refrigeration Contractors, the Editors assign this space each month to the association. The information below is furnished, for the most part, by the offices of the association and its local affiliates.

NARC Approves Separate Bids on Cooling Contracts

Policy on contractors' service warranties, suggested changes in architects' specifications on air conditioning installations, and improved production quality standards were foremost among numerous topics discussed by members and officers of the National Association of Refrigeration Contractors at their meeting Oct. 26-27 in Hotel Stevens, Chicago.

The meeting was a two-day affair, opening Oct. 26, Sunday, with the "annual" meeting required by the NARC constitution, and being followed by an open meeting that day and a meeting of NARC directors the day following. The "annual" meeting was immediately adjourned to next January in Cleveland, during the All-Industry Show, and the balance of the day spent in open discussion.

Considerable attention was given the subject of overlapping sub-contracts on heating, plumbing and air conditioning in the construction field,

after it was introduced by Richard D. Elgin, of General Air Conditioning Corp., Little Rock, Ark., contractor firm.

Mr. Elgin reported that in his company's territory there is a tendency to lump heating, plumbing and air conditioning in one section of the construction contract. As a result, he declared, some of the old established heating and piping firms are getting into air conditioning, and some air conditioning contractors are going into the heating and plumbing business.

Some air conditioning contractors lose out entirely, Mr. Elgin continued, where architects' specifications lump these three jobs together, and the bids on the various portions of the jobs, when submitted this way, also vary widely.

In view of the heat pump's gaining more widespread use, it was agreed that this problem becomes increasing-

ly important, and it was felt by those participating in the discussion that some strong effort should be made to see that air conditioning is brought into general construction contracts as a separate item, instead of being lumped in with heating and plumbing work. In this way, it was felt, the air conditioning contractor can get his rightful share of this business.

It was decided to present the problem to both the American Institute of Architects and to the Construction Industry Advisory Council, who in turn could advise all general contractors of this situation and perhaps move to correct it at the national level.

At the local level, NARC members plan to bring the situation directly to the attention of architects, general contractors, and refrigeration engineers, and urge corrective measures.

Considerable attention also was given to the matter of licensing and

ON THE matter of contractors' service warranties, a troublesome problem being given considerable thought these days, the Refrigeration Contractors Association of Los Angeles has recommended the following wording on contracts in regard to repair labor and/or material furnished by the contractor: "The seller warrants the workmanship and materials supplied by it against defects for a period of thirty days and shall be liable only for replacement of such workmanship and/or materials as it finds were defective and buyer hereby waives any and all claims for consequential and other damages arising therefrom."

The 30-day period mentioned in this clause is suggested and recommended as a sufficient warranty period for service or repair work, the association points out, and should not be confused with the one-year warranty on material and 90-day free service normally furnished with the sale of new equipment.

ARMSTRONG AD TELLS THE "LOCKER STORY"



This cutaway view of a typical locker plant and the accompanying flow chart of plant operations is featured in the fourth of a series of full-color advertisements by Armstrong Cork Co. stressing the importance of industrial insulation. Accompanying copy simply outlines locker plant services and processes. Full color 21 x 22-inch reproductions of both the illustration and the flow chart are available without charge from Armstrong Cork Co.

to its connection with unfair trade practices. It was pointed out that licensing, in the opinion of some contractors, was considered a "cure" for unfair trade practices, but that in reality this is not the case.

The function of licensing is not to correct unfair trade practices—it is a type of legislation designed to enforce the safety code, and to protect the health and welfare of the public, it was emphasized in the discussion. What licensing does is to provide that only qualified contractors shall perform those operations listed in the

safety code.

In a rather lengthy discussion of trade relations, emphasis was placed on the problem of requesting better final inspection by the producers of the various components employed in installing a job. Many companies, it was said, operate on the principle that a certain percentage of defective parts may be expected to go out. However, the general practice of manufacturers in replacing parts which are defective (during their warranty period) does not take into consideration the cost to the contractor of the labor involved in replacing the parts, nor of other costs, such as replacing refrigerant when failure of the part in question has caused it to be lost.

Favorable Response Reported

The problem has been brought to the attention of manufacturers and is receiving favorable response, Warren W. Farr, NARC president, reported to the meeting. In this connection, he also advised contractors to investigate thoroughly the possibility of carrying products insurance.

In discussing the problem of warranties and guarantees, it was re-

vealed that NARC is working out a suggested policy for contractors to follow, with the assistance of a legal counsel. This warranty by contractors, when prepared, would supplement the original manufacturer's warranty, and limit the contractor's liability to replacing those parts deemed defective by the manufacturer, the contractor supplying the labor necessary to replace the defective part.

Guarantee vs. Insurance

It was pointed out that a guarantee is not "insurance"; it simply guarantees the repair of equipment, but does not insure 100% operation of the equipment.

Other matters discussed included a proposal that a study of franchises be undertaken to see that the best interests of the contractor are protected, and the suggestion that contractors sell their own services aggressively in their local markets, by identifying their own firm name with jobs they do, instead of limiting this identification to the make of equipment used.

President Farr also reported that the General Contractors Association (of which NARC is a member) now

is driving for a return to the fixed-price basis on contracts, and has asked NARC to go along. Abandoning the time-and-materials basis is part of a move to reduce construction prices.

At the NARC directors' meeting the following day, applications of the Sacramento and Santa Clara Valley (Calif.) local associations for NARC membership were approved, as was a new decal for members' use. Measuring 8 x 10", one decal will be supplied each member. These are expected to be available within 30 days.

Charles Harris was named representative, and Theodore Reina alternate, on the task committee which is revising the American Standards Association B-9 code on refrigeration.

MORE CONTRACTOR NEWS ON PAGE 83

CONTRACTORS SIGHT STEEL PIPE SHORTAGE

Evidences of a critical shortage of steel pipe, particularly in sizes from 3/8" to 2 1/2", are increasing in reports received by National Association of Refrigeration Contractors from its members in Ohio and other states.

NARC is exercising its influence in an effort to bring about a more nearly adequate supply for its members. The pipe is used in ammonia refrigeration plants, on steam lines for air conditioning plants, and on water piping for low pressure refrigeration jobs.

NARC HEADS ADDRESS WISCONSIN CONTRACTORS

Warren W. Farr, president of the National Association of Refrigeration Contractors, was one of the speakers at the first convention of the Refrigeration Contractors' Association of Wisconsin, held at the Schroeder hotel, Milwaukee, on Nov. 29 and 30.

Another speaker was E. S. Wright, vice president of the national organization. Paul Reed of Perfex Corp., Milwaukee, also spoke.

An invitation to attend the convention was sent to the proprietor of every Wisconsin concern that sells, installs, repairs or services refrigeration equipment.

LOWER COST—Better SEAL Brush or Spray Adhesive COLD

The MODERN way to adhere vapor-seal membranes and insulations is to apply Laykold Adhesive COLD, right from the barrel, either with brush or high-pressure spray. YOU like the ease of handling and LOWER LABOR COST. Your CUSTOMERS like the complete SEAL which gives them LOWER MAINTENANCE and OPERATING COST.

Laykold
THE MODERN WAY

INSULATION ADHESIVE

Seals Membranes — Adheres Insulation

1. **COSTS LESS** in labor to apply.
2. **NO FIRE HAZARD** to job, men.
3. **NO WAITING** for heating.
4. **NO FUMES** to breathe, to taint stored food products.
5. **TIGHTER SEAL** — pressure spray penetrates, seals.
6. **UNIFORM ADHESION** — no lumps, no missed spots, air pockets.
7. **SELF-HEALS** nails, skewers, cracks, insulation joints.
8. **STAYS ALIVE** — keeps adhering.

Spray Laykold Products and reduce labor costs. Try them on ONE job — you'll never want to go back to old methods.

Ask our nearest office for literature, specifications, prices.

Other LAYKOLD Products

WEATHERCOAT — protection for block insulations, concrete, brick.

HYDROPEL — an admix to reduce water absorption in concrete.

FLOOR MASTIC BINDER — to make ideal floors for cold rooms.

FIBRECOAT — protection for metal and bituminous roofs.

REFRIGERATION BINDER — for waterproof plaster finish and with Lumnite, a wet wall adhesive.



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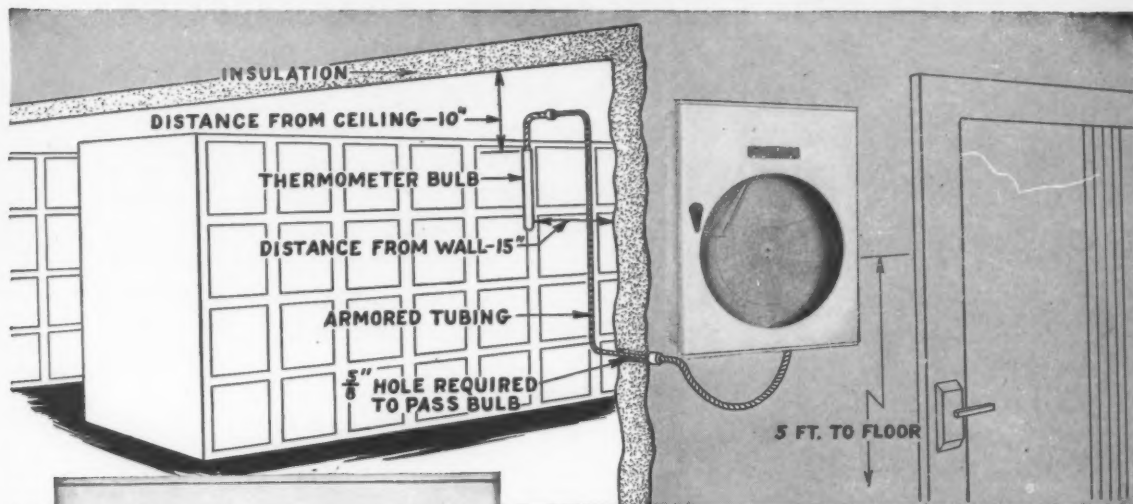
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Honeywell Recording Locker Room Thermometer, Model No. 645101; Chart No. 12777, Range -30° F. to $+70^{\circ}$ F., reverse. 12" diameter, seven-day revolution with one-hour time divisions. Has hand-wound chart drive as standard installation. Electric clock drive optional — self-starting synchronous electric clock, 115/230 v., 20–50–60 cycles. Equipped with 5' of bronze armored tubing and stainless steel bulb with 10" extension neck.

THE Honeywell Recording Thermometer, a product of the Brown Instrument Division, provides permanent and continuous chart records of temperatures—day and night—convincing proof to locker plant patrons that temperatures are held constantly within safe limits to protect their property against spoilage.

Honeywell Locker Thermometer temperature chart records are accurate. They promote customer good will—they safeguard locker operators against possible damage claims because they furnish irrefutable evidence that correct temperatures are maintained. The large, easy to read charts and the streamlined appearance of the thermometer add prestige and distinction to the plant.

In states where recording thermometers are mandatory, Honeywell thermometers fulfill every legal requirement. If your state has not passed this legislation, don't wait—profit now by having your own men install the accurate and dependable Honeywell Recording Thermometer. Order from your wholesaler or mail the coupon.

Mail this Coupon Today

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CONTROL SYSTEMS

You've Got Our Number!

(BOOTHS 310-312)

AT THE *Cleveland*

ALL-INDUSTRY SHOW

JANUARY 26-29, 1948

There'll be lots to see at this year's show, but you won't want to miss the Ranco exhibit! Whether you want to see and discuss the latest developments in refrigeration controls, or just relax for a bit and discuss things in general, we'll give you a hearty welcome! Remember our booth numbers: 310-312.

TEAR ON
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LINE

MEMO

Be sure to drop in to see
RANCO Inc. exhibits -
Booths 310-312, Cleveland
Jan 26-29, 1948

Ranco Inc.

World's Largest Manufacturers of REFRIGERATION



COLUMBUS 1, OHIO

CONTROLS

THE SERVICE MAN'S DEPARTMENT

Here's how

Edited by
Warren W. Farr

Are You Getting Those Prospect Names?

We hope you're planning to use these cold-weather days, when your service business is apt to slow down enough for you to catch at least a few deep breaths, to compile a list of prospects that you can go to work on when the holiday season is past. From all indications, 1948 will be "the year," as far as resumption of anything like real selling activities, so it'll pay you to be ready for it.

There are any number of ways in which to get up a prospect list like this—but one of the very best, we've found, is to "use the user." A satisfied customer, after all, is your own best advertisement—and a customer who's just bought a new piece of equipment from you won't mind at all taking a few minutes to tell you about acquaintances of his, in the same or similar businesses, who'll be buying sooner or later.

You can't beat the sales punch you get by using a friend's name on your

first call on a new prospect. It goes a long way toward making that good impression that means so much.

If you've overlooked this excellent source of prospects, why not back-track and make a few "inspection calls" on your most recent customers, and get those new names. It'll pay off in future new business.

WANT TO EARN \$5?



You don't have to be a writer or a literary genius! Just jot down some of the shortcuts you've developed in your maintenance or installation work and send them to **HERE'S HOW EDITOR, REFRIGERATION INDUSTRY**. Your \$5 will be paid promptly when your maintenance tip is published in the magazine. Let's hear from you!

About Protectors For Torch Threads

The service tip we ran in our October issue on how to make a thread protector for a Prest-O-Lite torch drew a raft of comment, a portion of which we're publishing below. Nobody quarreled with the main idea advanced by the contributor, C. B. Scofield, of Fulton, Mo., that a protective device was called for.

The general tone of the reactions seemed to be that Mr. Scofield was going to special efforts to solve a problem that (to these service men, at least) didn't call for that much work.

Here are excerpts from three of the letters we received. Writes Alford

F. Thompson, of Albuquerque, N. M.:

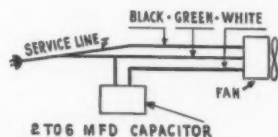
"... Why go to all that trouble with the odd size drill and all? Just get a $\frac{5}{16}$ " flare nut and that will screw right on the threads of the test torch."

According to Herbert Cain, of Lynn, Mass.:

"... A much simpler method is to use a standard $\frac{1}{4}$ " pipe cap, which fits perfectly. I use them on all my tips and leak detector."

From Claude A. Raab, of Alcan Refrigeration and Engineering Co., Los Angeles:

"To protect the threads on the tips on the leak detector and on the torch tips to my Prest-O-Lite set, I use $\frac{5}{16}$ " flare caps. These caps have the same

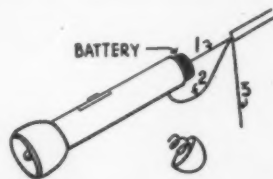


HERE is a simple way in which to test late model G-E fans.

Take a capacitor with 2 to 6 MFD. Connect white fan wire to one capacitor terminal, and green fan wire to the other capacitor terminal. Then connect lead wire to black fan wire and to green fan wire.

This is a two phase fan, and so will not run off of a 110 volt, 60 cycle line. When operating successfully, it takes one phase from the 110 volt, 60 cycle line and the other is generated by the compressor motor. The accompanying sketch illustrates the method I suggest.

C. J. Roy
El Dorado, Ark.



HERE'S a quick tip for frustrated service men who get themselves into difficulty and back-breaking work just to find out which wires on a three (3)-way or more hook-up control the thermostat, motor, lights, etc.

Make use of your flashlight! Here's how:

1. Remove cap from back of flashlight case.

2. Take any 2 of the 3 wires in the hook-up.

3. Attach—or simply hold—one wire on the rear flashlight battery (as shown in the sketch) and ground the other wire on the flashlight body.

4. (A) Press flashlight button to "ON"; (B) Throw control button to "ON".

If the flashlight bulb lights, that's the control circuit to the motor. Other variations can be made for other conditions.

M. G. Horwitz
Washington, D. C.

thread and fit perfectly—in fact I sometimes wonder if Prest-O-Lite built their sets to fit these caps, or if the caps are built to fit the Prest-O-Lite sets.

"At any rate, I find it a valuable asset in protecting this equipment, since it not only keeps out dirt but also protects the end in case they are dropped."

Testing Compressor Suction Valves

There is no sure and accurate test for suction valve leaks that is applicable in the field. However, one of the most practical tests for suction valve performance is a check on the vacuum obtainable with any given compressor.

Proceed in the same manner as you would in testing compressor discharge valves. If, after doing this, it is possible to obtain a 20" vacuum against a head pressure of from 100 to 150 pounds gauge, it might be assumed the suction valves are seating properly.

It is true that a "poor pumper" might also be traceable to too much head clearance above the pistons, or

leak-by, past the piston rings. In any of these events, a further check would be indicated.

Keep Your Customers Thinking About You

Customers have pretty short memories . . . unless you jog them every now and then.

Of course, all of us may imagine that we do the sort of work that the average customer simply can't forget—but all of us can remember times when it didn't work out that way in practice.

The fall and winter months usually provide most of us with spare time enough to do a good deal of prospecting and planning for additional business. It's good business to always be on the look-out for new accounts—but it certainly doesn't pay to forget the old ones.

Keep your customers thinking about you. One very good way to do this is by a series of direct-mailings, pointing out the various services you have to offer, and otherwise doing an "institutional" job for you with the customer. Offering a "special", a free check-up of equipment for example,

FOUR-IN-ONE TESTER



A new 4-in-1 appliance tester which checks voltage, amperage and two separate temperatures all at one time is now offered by Kelvinator Div., Nash-Kelvinator Corp. The two temperature readings, which are registered electrically, can be taken in the same unit in two separate refrigerator cabinets. Weighing less than 10 pounds, the instrument is compactly built into a special carrying case. Developed in collaboration with Kelvinator service engineers, the new tester is manufactured by J. B. T. Instruments, Inc., New Haven, Connecticut.

is one tried-and-true way of arousing interest.

The mailings needn't be elaborate—although naturally it's to your advantage to make them as attractive as possible. But we know organizations who use nothing but penny postcards, and do a bang-up job of follow-ups like this.

The best way, of course, is to have one of your servicemen call on the customer personally, and either make the check-up at that time or arrange for it to be done at a definite time later on. Then your customer is sure you're interested in him, and he'll be more apt to remember you.

Then, too, there's nothing like a personal call to get a line on what the customer may need in the line of new equipment.

NEW AIRCO FLUX FOR STAINLESS STEEL

The Air Reduction Sales Co., New York City, has recently announced the availability of a new flux for the oxyacetylene welding of stainless steels and high chromium bearing alloys. The flux has been designated as Airco Formula No. 34.

After extensive field trials, the new Airco flux has proved to be far superior to any previous stainless steel welding flux they have put on the market, says the manufacturer.

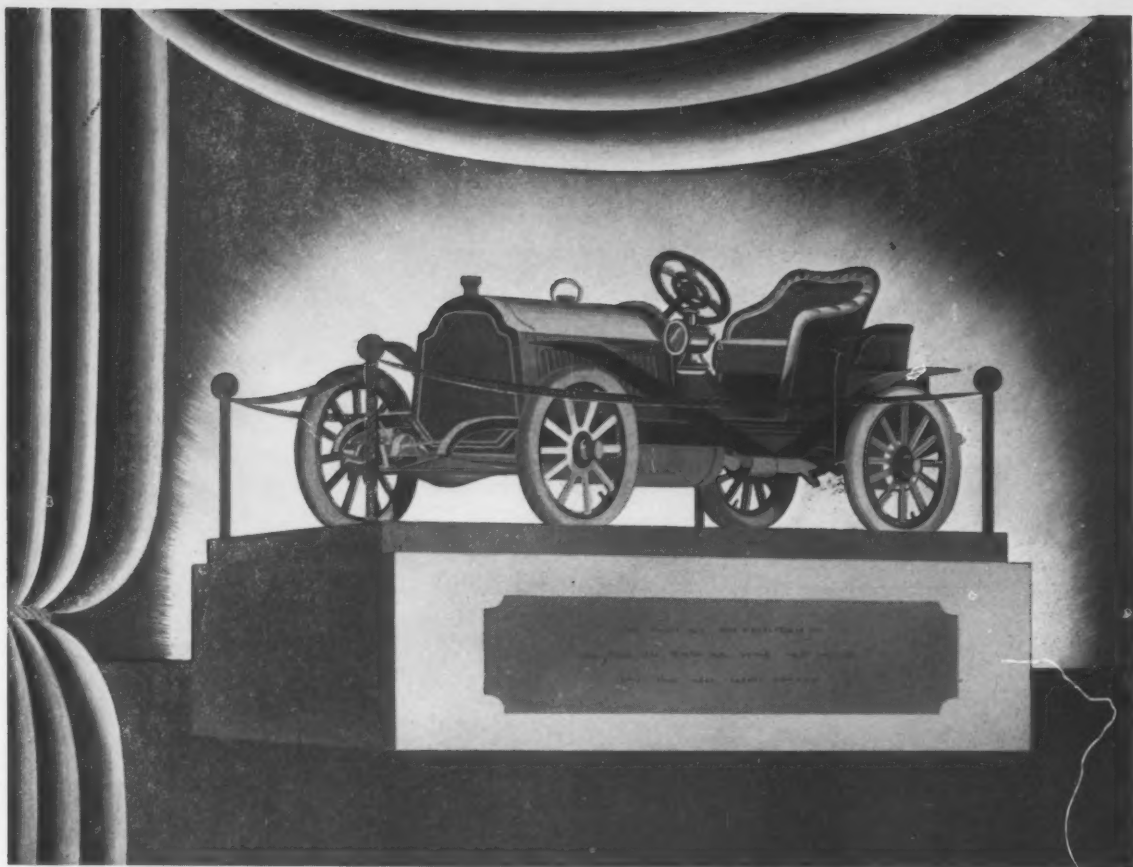
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THIS MUSEUM PIECE IS THE GRANDDADDY OF BUSH FINNED COILS

BUSH

OUR FORTIETH YEAR

Back in 1907, a refrigeration system consisted of a compressor and many feet of two-inch iron pipe. It was inefficient, costly, bulky.

But the 1907 *automobiles* had efficient cooling systems . . . finned-coil radiators with power-driven fans. And Bush, who was building these radiators, saw how the same principles could be applied to commercial refrigeration systems.

So Bush began building finned-coil evaporators and condensers. They adopted the automobile's power-driven fan to increase efficiency and reduce size.

Today . . . 40 years later . . . every modern refrigeration system employs the finned coil. And today Bush builds a substantial part of all low-side commercial refrigeration equipment.

Bush products are sold by leading refrigeration wholesalers everywhere.

HEAT TRANSFER PRODUCTS • BUSH MANUFACTURING COMPANY • HARTFORD, CONN.

415 LEXINGTON AVE., NEW YORK • 549 W. WASHINGTON BOULEVARD, CHICAGO • EXPORT ADDRESS: 13 EAST 40th ST., NEW YORK • CABLE "ANLAR"

OPPORTUNITIES

Classified Advertising Section

Rates: for "Positions Wanted" \$3.50 minimum, limit 25 words. For all other classifications, \$3.50 minimum for 25 words, each additional word 10c; bold-

face type or all capitals, \$6.00 minimum for 25 words, each additional word 15c; limit 50 words. Box addresses count as five words.

POSITIONS AVAILABLE

SALESMEN: Several salesmen wanted to sell the famous BEN-HUR Farm and Home Freezers to distributors and dealers. Write A. B. Bechaud, Ben-Hur Mfg. Co., 634 E. Keefe Ave., Milwaukee 12, Wisconsin.

REGIONAL SALES MANAGER

Large, nationally known commercial frozen food equipment and Ice Cream Cabinet manufacturer has openings in Washington, D. C., Texas, Pittsburgh, Detroit and Minneapolis territories.

Must be familiar with Refrigeration or Ice Cream or Frozen Food fields. Substantial drawing account against liberal commission with bonus arrangement. Real opportunity for right man. Send resume of qualifications and experience. All replies strictly confidential. Box R1-714 Equity 113 West 42nd St., New York City 18.

EQUIPMENT FOR SALE

Brand new 10 h.p. Westinghouse Condensing Unit. Substantial Discount.
THE FIRST NATIONAL BANK
GAINESVILLE, FLORIDA

Quality bobtail fountains; reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stain-

less steel back bars; with machines. Equipment made to special order. Frigitemp Corp., 931 Bergen St., Brooklyn 16, N. Y. MA 2-9093.

Freon Cylinders 25 lb., 50 lb., and 145 lb. capacity in stock. All cylinders ICC-4B-300, condition guaranteed. We buy and sell cylinders.

Home Gas Equipment Co.
1836 E. 23rd St. Cleveland, Ohio

"CLOSING OUT: Large stock of flare fittings. Brand new and standard make. Also some shut-off valves and V-belts. Box No. 12147."

"American Air 20x20x2 recleanable metal filters; lots of 25 @ \$3.15 each f.o.b. Jackson, Mississippi. Plumbing Wholesale Co., Jackson, Mississippi.

Stop Terminal Leaks in Crosley Sealed Units by using the Jiffy Terminal. Easy to install, no special tools needed, can be installed in a few minutes without removing unit from cabinet. Set of three terminals \$5.00, or see your jobber. Detroit Sealed-In Parts Co., 19191 Rogge, Detroit 12, Michigan.

FOR SALE—Air-cooled and Water-cooled, remanufactured condensing units, ¼ up to 2 H.P. Write for particulars, Edison Cooling Corp., 310 East 149 St., Bronx 51, N. Y.

"THE NEW LOOK"



We never saw anything like this in a pool hall either, fellows, but this is the way the water cooler division of REMA elects to illustrate the use of its products in these and similar establishments. The place pictured is the newly opened Cue & Cushion in Springfield, Ill. The gal is Marilyn Elgin, and she's described as a "billiard enthusiast!"

EQUIPMENT FOR SALE

FOR SALE Front and Back Bars, Beverage Coolers, Food Freezers. Rathbun Refrigeration Company, 325 Scribner Avenue, N. W., Grand Rapids 4, Mich.

REPAIR SERVICE

Frigidaire Meter-Miser repaired \$30.00, 10 day service, also other units. No Majestic or General Electric top mount units. Steen Service Shop, Carroll, Iowa.

Rebuilding and Exchange Service on open style compressors—all sizes, Condensers, Float Valves, Water Valves, Blower, Gravity and Ice Maker Coils. Ninety day Unconditional Guarantee. Write us on your company letterhead for our illustrated, priced catalog. Refrigeration Maintenance Corp., 321 E. Grand Ave., Chicago, Ill.

Refrigeration Controls and Valves Repaired. Complete service for all makes and types. Also Stoker and Oil-Burner controls repaired. All work guaranteed. Write for prices or just mail in controls. Acme Control Service, 5521 Lawrence Avenue, Chicago 30, Ill.

SEALED CROSLY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three \$5.25 (Part No. 1020). Installation tool 20c. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

NEW SALES MANAGER

Thomas C. Carey has been appointed sales manager of Appliance Distributors, Admiral distributor in Chicago.

MAGIC IN A SMALL BOTTLE

FREEZE-UPS ELIMINATED RIGHT AWAY!




ICE-X quickly cures emergency freeze ups when ice forms at the expansion valve or capillary tube. Harmless to use. Great for Freon, Carrene, or Methyl Chloride systems . . . The dependable liquid anti-freeze.

"ONE SERVICE MAN TELLS ANOTHER - IT'S GREAT"

ORDER FROM YOUR JOBBER OR -

EXCLUSIVE NATIONAL DISTRIBUTOR
THE HARRY ALTER CO. 1728 S. MICHIGAN AVE.
CHICAGO 16, ILLINOIS

JOBBERS: WRITE FOR SPECIAL PROPOSITION!

COMMERCIAL SALES . . .

Continued from page 41

er. Rather, it is with the thought in mind that the years of experience of many of its members as successful merchants will be beneficial to the entire industry as a whole. The facts contained herein, and the comments of the layman, will, it is hoped, guide the younger business man into the correct channels for the successful selling of such equipment—at greater profits and a higher volume of sales.

In today's modern world of business competition, selling methods have changed. The small, one-man shop, with its parts cluttered, greasy floor and alley way entrance, no longer plays a part in one of America's fastest-growing industries—the marketing of commercial refrigerator equipment.

To Succeed, You Must Grow

It must be emphasized to both the distributor and dealer that to do business successfully today, he must grow with the trend of the times. He must be able to present his wares on a par with the modern merchandising ideas accepted by the commercial refrigerator buyer and the general public alike.

Food, in itself, is an important industry. It comprises over 25% of our national economy. Frozen foods, and the displaying and safe keeping of perishable food products by use of commercial refrigerator equipment in retail store outlets, has today become a major development in both the food and refrigerator industry.

Packers, manufacturers and engineers, working in full cooperation with established, reliable commercial refrigerator distributors and dealers, can advance and develop this newly accepted method of merchandising food products into one of the nation's most profitable enterprises.

It must be kept in mind that the marketing of frozen foods is still in its infancy. Through continuous experiments and developments of better methods for freezing fresh fruits and vegetables, and the rapid advancement of packing and freezing all kinds of fresh meats, fish and poultry, the refrigerator equipment industry will have advanced far beyond its greatest expectations from a "volume of sales" standpoint of all commercial refrigerator dealers and distributors.

It's Not Wishful Thinking

Even after an accumulation of facts, some men will say that such a gigantic advancement of an industry is *wishful thinking*. One need only look at the sales records of successful distributors and dealers over the past 10 years.

The answer is plain. They have become successful operators because they have grown and built their business with the trend of the times. They have been able to grasp the meaning of modern merchandising methods and by modernization of their own stores and salesrooms, have become today's leaders in an industry which is slowly but surely promoting a high standard of sales ethics and product presentation. In this program, the NCRSA is playing an important part.

FLYING DISTRIBUTOR



Norvell S. "Cy" Shobe, head of Shobe, Inc., new Coolerator distributor in Memphis, Tenn., poses on the wing of his Beechcraft Bonanza which he uses for flying visits to his dealers. Mr. Shobe has been in the appliance field since 1922, and has been flying since 1936. He became so proficient at this hobby that in 1942 when he volunteered for Navy service he was ordered to set up a flight instruction program in northern and northwestern parts of the country. Later he was placed in charge of Navy flight training for 16 colleges in western and midwestern states. Upon his release from the Navy he joined with W. R. Kent to form Shobe, Inc.

CHEERS FOR THE NEW SECTION

Alex J. Miller, Inc.
Buffalo 12, N.Y.

Editor:

It is gratifying to learn of the special new commercial refrigeration section which you have started in your October issue.

We are confident that other dealers and distributors will welcome the opportunity to share their views and report on various activities of mutual interest to all concerned. . . .

May we again extend our congratulations on the new addition to the interesting and informative articles which you now publish.

E. L. Hill, Jr.

F. W. Vaden Co.
Oklahoma City 2, Okla.

Editor:

I am in receipt of your letter in regard to the publication "Commercial Refrigerator Sales News" department carried in THE REFRIGERATION INDUSTRY magazine.

I am certainly glad to hear about this publication and assure you that we are intensely interested in receiving this.

I might add at this time as a new item that on Oct. 13 we had a meeting at the Skirvin Tower Hotel during the State Retail Grocers Convention of eight of the refrigeration distributors in Oklahoma City. We had representatives from McCray, Tyler, Super-Cold and ourselves as Hussmann dealers. The writer was appointed temporary chairman. We are passing out a list of the by-laws of the National Association and application blanks, and we have a meeting planned to perfect a permanent organization for Oklahoma City and to elect



For IMMEDIATE DELIVERY — a general-utility housing for those replacement starting capacitors.

Accommodates standard 1 1/2 x 3 1/4" units. Heavy-gauge metal. Completely covers and protects capacitor and terminals. Fits motor contour snugly.

Provides strong, rugged, shock-proof, business-like installation. No auxiliary caps or brackets required.

● Ask Your Jobber . . .

This item is now in stock. Order a supply now! Also order those exact-duplicate or universal motor-starting capacitors. Latest catalog on request.



FOR RADIO-ELECTRONIC AND
INDUSTRIAL APPLICATIONS

AEROVOX CORP., NEW BEDFORD, MASS., U.S.A.
Export: 19 E. 40th St., New York 18, N.Y. • Cable: 'ARLAB'
In Canada: AEROVOX CANADA LTD., Hamilton, Ont.



Redmond

... BUILDER OF MORE THAN 20,000,000 MICROMOTORS

HERE is an organization of specialists who concentrate every effort on small electric motors and their application. Here the customer can discuss engineering details confidentially, knowing he is dealing with a motor manufacturer that does not build consumer products in competition with his own. When you need advice, contact Redmond. When you need dependable low-range fractional motors, check on the famous Redmond Micromotors.

A.C. MICROMOTORS
4-pole shaded pole up to 1/15th hp.

D.C. MICROMOTORS
Continuous duty up to 1/20th hp.
Intermittent duty up to 1/10th hp.

SPEED CONTROLLERS • SMALL BLOWERS



Redmond COMPANY, INC.
MAIN OFFICES: OWOSSO, MICHIGAN

EASTERN AREA SALES: 420 Lexington Ave., New York 17, N. Y.

PACIFIC COAST SALES: Redmond Company of Calif. Inc., 117 W. 9th St.
Los Angeles 15, Calif.

officers for the association.

When the formation of this association is completed and we have the officers elected, we will drop you a line and let you know the full news of the forming of this association.

JACK SHOOT.

NCRSA LAUNCHES PRIZE MEMBERSHIP CONTEST

A nationwide prize contest for additional membership, open to all present members of NCRSA, has been announced by George B. Herman, president. The contest will run until Jan. 26, with the winner being announced at the annual NCRSA banquet in Cleveland on Jan. 27.

Prize for the member enrolling the greatest number of new members will be a complete round-trip to the All-Industry Show in Cleveland, or \$100 in cash if he cannot attend. Point score will determine winners, with 25 points given for each new member and 15 for each new associate member signed. Checks for a full year's dues must accompany each new membership.

Further information may be obtained from the executive secretary's office, 217 Produce Bank Bldg., Minneapolis.

NEW COMMERCIAL OUTLET IN JACKSON, MISS.

General Refrigeration & Appliance Co. has been opened by T. E. Wright and A. D. Hopkins at North State and Amite Sts., Jackson, Miss. The firm will handle walk-in- and reach-in units, display cases, milk and beverage coolers, air conditioning and water coolers. Service manager is J. L. Jordan, with Nelene Dill as secretary and K. C. Gallagher as assistant manager.

JAMES FELTS JOINS COLDEW SALES STAFF

Coldew Corp., South Gate, Calif. manufacturer of commercial refrigeration equipment, has named James Felts to its sales staff. He formerly was with Frigidaire and Norge in sales positions, and was general manager of E. B. Garrett Co., Eldorado, Ark.

CONSULTANT NAMED

J. Gordon Lippincott of the New York industrial design firm, J. Gordon Lippincott & Co., Inc., has been appointed packaging consultant serving on the research committee of the Frozen Food Institute, Inc.

THE REFRIGERATION INDUSTRY

BEN HYATT HEADS DETROIT CONTRACTORS

Ben J. Hyatt, of Copeland Authorized Service, is the new president of the Refrigeration Contractors Association of Detroit. Vice president is George Murphree, of Refrigeration Maintenance Corp. Frederick R. Bolton continues as executive secretary and counsel of the group, which is affiliated with NARC.

WHEELER HEADS CHICAGO CONTRACTORS' GROUP

H. E. Wheeler, of Air Comfort Corp., is the new president of the Refrigeration Contractors Association of Chicago. Vice-president is Walter McCarty, of McCarty Bros. Equipment Corp., and a newly elected director is Theo C. Johnsen, of Johnsen Refrigeration Co.

PROGRESS ON MODEL LICENSE CODE REPORTED

National Association of Refrigeration Contractors reports that a suggested licensing ordinance, which has been in process for some time, has been prepared and is in the hands of

the special NARC committee handling that matter. Copies also have been sent to the 23 local contractor groups affiliated with NARC, for their comments.

TO HELP more businessmen get their share of sales in the \$5,000,000,000 annual government market, the N.Y. Journal of Commerce has just issued a new 32-page booklet designed to take the mystery out of bidding and contract procedures. The booklet is titled "How to Sell to the Government." Copies may be obtained from the Journal of Commerce, 63 Park Row, New York 15, N.Y., at 50 cents each.

"How to Sell to the Government" is a consolidation of a series of detailed studies made by the business newspaper on the federal, state and municipal markets of the nation. It is prepared as a guide to manufacturers, jobbers, and dealers alike, and notes that more than 100,000 different items are bought each year by the country's many governmental agencies.

SEVEN COAST GROUPS ARE IN NARC RANKS

Two more associations have joined the National Association of Refrigeration Contractors, bringing the total

of such affiliated groups to 23.

One is the Refrigeration Dealers and Contractors Association of Fresno, Calif., with 15 members. President is Chas. G. Bell of Bell, Hughes & Knowles; vice-president, John Geringer of Conditioned Air & Refrigeration Co.; secretary-treasurer, G. J. Neill of Arctic Refrigeration Co., 4190 Belmont, the present headquarters of the association.

The other is the Refrigeration Contractors Association of Sacramento Valley, Calif., with 15 members. President is A. M. MacLennan of MacLennan Co., vice-president, A. Schoen of Al Schoen Air Conditioning & Refrigeration Co.; secretary-treasurer, S. A. Peterson of P & S Refrigeration Equipment Co.; Sergeant-at-Arms, Cliff Stewart of Refrigeration Engineering Co.; executive-secretary, Richard J. Jacinto, with offices at 1012 J St.

Both associations will hold regular monthly meetings.

The West Coast now has seven NARC affiliated associations. Headquarters of the other five are in San Diego, Los Angeles, San Francisco, Portland and Seattle.

Twenty years ago this month the late Jerry Tyler, with three employees in less than 1,000 sq. ft. of floor space, started the organization that today employs over 1,000 workers in over 400,000 sq. ft. of factory space in modern plants in Niles, Michigan, Cobleskill, New York, and Waxahachie, Texas.

From the very first, a major Tyler policy has been to **HELP YOU SELL!** Tyler helps you beat competition with a pledge of quality welded-steel construction and outstanding value based on the best in engineering, design, research and mass-production—with two great lines—with an alert and co-operative sales staff—with aggressive sales promotion, national advertising, complete sales helps, and store planning assistance.

SUB-AGENCIES AVAILABLE. Most territories are now allotted to Tyler Agents, but in many regions Sub-Agencies on the **HARDER-FREEZE** line are open through them to those who meet requirements. **TYLER FIXTURE CORP., NILES, MICHIGAN.**

TYLER
20th YEAR
HELPING YOU SELL

IT'S
TYLER

FOR FOOD REFRIGERATION

TYLER FIXTURE CORP., Dept. H-12 Niles, Michigan
Please send information on Harder-Freeze Sub-Agency.

NAME _____
ADDRESS _____

FOR *Faster Service* AND **MORE PROFITS**

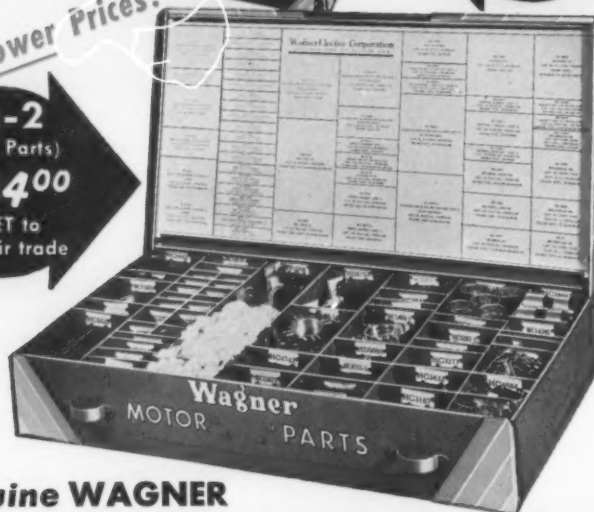
YOU NEED BOTH THESE HANDY KITS



M-1
(61 Parts)
\$9.00
NET to
Repair trade

New Lower Prices!

M-2
(680 Parts)
\$144.00
NET to
Repair trade



Genuine WAGNER

**Fast Moving Electric Motor Repair Parts
AVAILABLE NOW!**

M-1—For “one-trip” jobs... as useful to the service man as his pliers and screwdriver, and almost as easy to carry. The M-1 kit box is of heavy fiber, contains a variety of 61 of the motor repair parts most commonly needed for domestic appliance type motors up to and including $\frac{1}{2}$ horsepower.

M-2—For your shop... a convenient and economical way to get wide coverage of repair parts.

The M-2 kit box is of sheet steel, contains a variety of more than 680 fast moving parts for domestic and industrial type repulsion-start induction brush-lifting and capacitor-start motors up to and including 3 horsepower.

M-1 and M-2 kits are available now at our 25 branches and 325 authorized service stations. Or if more convenient, order your kits by using the coupon below.

WAGNER ELECTRIC CORPORATION
6400 Plymouth Avenue, Saint Louis 14, Mo., U. S. A.

Date.....

Please ship.....Motor Parts Assortment M-1 (\$9.00 net each) \$.....
(Quantity) Shipping Weight 3 pounds
F. O. B.
Point of Shipment.....Motor Parts Assortment M-2 (\$144.00 net each) \$.....
(Quantity) Shipping Weight 46 pounds
Order No.....Total \$.....

Company.....

Address.....

City.....Zone.....State.....

M47-21

Wagner WE Electric

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THE REFRIGERATION INDUSTRY

*You've Seen this Display
on Your Wholesaler's Counter . . .*



**Now USE these
New APC Valves...**
**for ALL TEMPERATURES... Low,
Commercial, or Air Conditioning**

• Install these two new A-P Thermostatic Expansion Valves WHEREVER A PRESSURE LIMITING FEATURE IS DESIRABLE . . . on every system showing any possibility of overload. You'll save service and repair time, and even motor breakdown by their prompt use.

Like all A-P Expansion Valves, the new Model 211 (Fixed Superheat) and Model 212 (Adjustable Superheat) can be installed in any position, any location, any ambient temperature without affecting control accuracy.

Put these two new A-P DEPENDABLE Valves to work — for your profit, and for your customers' satisfaction. Ask your wholesaler for operating and application details.

AUTOMATIC PRODUCTS COMPANY

3230 West Thirty-Second Street • Milwaukee 10, Wisconsin
Export Dept. 117 Grand Street, New York 16, N. Y.



Dependable

REFRIGERANT VALVES

GREETINGS

The shadows of another year are lengthening. This year will soon enter the portals of eternity to be recorded as another eventful chapter of history.

For some, the days have passed with lightning speed; for others the hands of the clock seemingly have stood still.

For most of us, however, the year has given a full measure of time equally divided and well filled with the usual allotment of life's joys and sorrows.

But Christmas time provides an occasion when we put aside for the moment the rush and cares of the day and give serious thought to the worthwhile things in life.

Merry Christmas
1 9 4 7

It is a time when we feel kindly disposed toward one another, and deeply grateful for the many friendships we enjoy. Christmas inspires us to express our

gratitude for the happiness which the passing year has brought, and to look forward to the New Year with hope and courage and sincere good will for all.

As you have so generously given us your friendship and confidence we want you to know that your faith in us has been

appreciated . . . that we welcome the opportunity to serve you in the future as we have been privileged to do in the past. Please accept our sincere wishes for a very Merry Christmas and a Happy and Prosperous New Year.

Happy New Year
1 9 4 8



THE REFRIGERATION INDUSTRY

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